National Park Service
U.S. Department of the Interior

Rock Creek Park
Washington, DC

# Rock Creek and Potomac Parkway, Rock Creek Park

## Rehabilitation of Rock Creek and Potomac Parkway From Virginia Avenue to P Street Bridge and the Thompson Boat Center

## Environmental Assessment

**May 2005**

# ENVIRONMENTAL ASSESSMENT

# REHABILITATION OF ROCK CREEK AND POTOMAC PARKWAY FROM VIRGINIA AVENUE TO P STREET BRIDGE & THE THOMPSON BOAT CENTER

**May 2005**

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**ROCK CREEK AND POTOMAC PARKWAY, ROCK CREEK PARK**
Washington, DC

United States Department of the Interior • National Park Service

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**U.S. DEPARTMENT OF THE INTERIOR**
**NATIONAL PARK SERVICE**
**in cooperation with**
**FEDERAL HIGHWAY ADMINISTRATION**
**EASTERN FEDERAL LANDS HIGHWAY DIVISION**

# ENVIRONMENTAL ASSESSMENT FOR THE REHABILITATION OF ROCK CREEK AND POTOMAC PARKWAY FROM VIRGINIA AVENUE TO P STREET BRIDGE & THE THOMPSON BOAT CENTER

**ROCK CREEK AND POTOMAC PARKWAY, ROCK CREEK PARK**
**WASHINGTON, DC**

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## Summary


The National Park Service, in cooperation with the Federal Highway Administration – Eastern Federal Lands Highway Division, proposes to rehabilitate Rock Creek and Potomac Parkway from Virginia Avenue to P Street, NW and to rehabilitate the access road, bridge, and parking area of the Thompson Boat Center in Washington, DC. Major project components entail milling and overlaying the parkway from Virginia Avenue to P Street and the Thompson Boat Center parking area; realigning the foot and bike trail in this section of the parkway; minor bridge repairs to the L Street bridge; ramps to and from K Street and Pennsylvania Avenue would be milled and overlaid; and reconstructing the P Street ramp to and from the southbound Parkway.

This Environmental Assessment analyzes the potential impacts of three alternatives (a No-Action Alternative and two action alternatives) on the human environment in accordance with the National Environmental Policy Act of 1969. Under the No-Action Alternative (Alternative A), the National Park Service would continue with minor spot repairs to the parkway and the Thompson Boat Center parking areas and bridge. No comprehensive milling and resurfacing program would be conducted. Under Alternatives B and C, the National Park Service would mill and overlay the parkway from Virginia Avenue to P Street, the Thompson Boat Center access road, bridge, and parking area, and ramps to and from K Street and Pennsylvania Avenue; conduct minor repairs to the L Street bridge; replace in kind the existing street lights; replace in kind the existing median at Virginia Avenue, and conduct drainage improvements to collect and improve drainage of a seep area. The difference in the action alternatives is Alternative B (Preferred Alternative) would realign a segment of the foot and bike trail away from the parkway; whereas, Alternative C would realign a portion of the parkway away from the foot and bike trail.

The No-Action Alternative and the action alternatives would either have no or negligible impacts on water resources; air quality; soundscape management; lightscape management; cultural resources; topography, geology, and soils; agricultural lands; prime and unique farmlands; wildlife; rare, threatened, endangered, candidate species, and species of special concern; socio-economic environment; land use; environmental justice; park operations, concessions operations; community facilities and services; and infrastructure.

Under the No-Action Alternative, there would be moderate, long-term, adverse impacts on health and safety and transportation/traffic. The No-Action Alternative would have minor, long-term, adverse impacts on cultural landscapes, and visitor experience and use. No impacts would occur to vegetation.

Under Alternative B (Preferred Alternative), there would be moderate, long-term beneficial impacts on health and safety, transportation/traffic, and visitor experience and use; and a negligible, long-term, adverse impact on vegetation. Minor, short-term, adverse impacts would occur to health and safety and moderate, short-term, adverse impacts would occur for transportation/traffic and visitor experience and use. Minor, long-term, adverse impacts to the cultural landscape would occur. No impacts to archeological resources would occur. The realignment of the trail would be a more sustainable, long-term solution than Alternative C.

Under Alternative C, there would be moderate, long-term, beneficial impacts on health and safety, and transportation/traffic. Minor, long-term, beneficial impacts to visitor experience and use would occur. A minor, long-term, adverse impact would occur to cultural landscapes and vegetation. Minor, short-term, adverse impacts would occur to health and safety. Moderate, short-term, adverse impacts would occur for transportation/traffic and visitor experience and use. No impacts to archeological resources would occur.

**Note to Reviewers and Respondents**

If you wish to comment on the Environmental Assessment, you may mail comments to the name and address below by June 13, 2005. Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address from the record, which we will honor to the extent allowable by law. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment. We will make all submissions from organizations or businesses and from individuals identifying themselves as representatives or officials or organizations or businesses available for public inspection in their entirety.

Please address all comments to:
Adrienne Coleman, Superintendent
Rock Creek Park and Rock Creek and Potomac Parkway
3545 Williamsburg Lane, NW
Washington, DC 20008-1207

Or by email to:
**rocr_virginiaaveproject@nps.gov**

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# PURPOSE OF AND NEED FOR ACTION

The National Park Service, in cooperation with the Federal Highway Administration – Eastern Federal Lands Highway Division, proposes to rehabilitate the Rock Creek and Potomac Parkway from Virginia Avenue to P Street, NW and the Thompson Boat Center parking area in Rock Creek Park, Washington, DC (see Figure 1). This Environmental Assessment analyzes the potential environmental impacts that would result from the implementation of the proposed Rehabilitation of Rock Creek and Potomac Parkway from Virginia Avenue to P Street, NW and the Thompson Boat Center parking area in Rock Creek Park. This Environmental Assessment has been prepared in accordance with the National Environmental Policy Act of 1969, the regulations of the Council on Environmental Quality for implementing the Act (40 Code of Federal Regulations 1500-1508), and the National Park Service Director's Order # 12 (*Conservation Planning, Environmental Impact Analysis, and Decision-making*) (NPS, 2001). In accordance with Section 800.8 of the Advisory Council on Historic Preservation's regulations (36 CFR 800), the process and documentation required for preparation of this Environmental Assessment would also be used to comply with Section 106 of the National Historic Preservation Act.

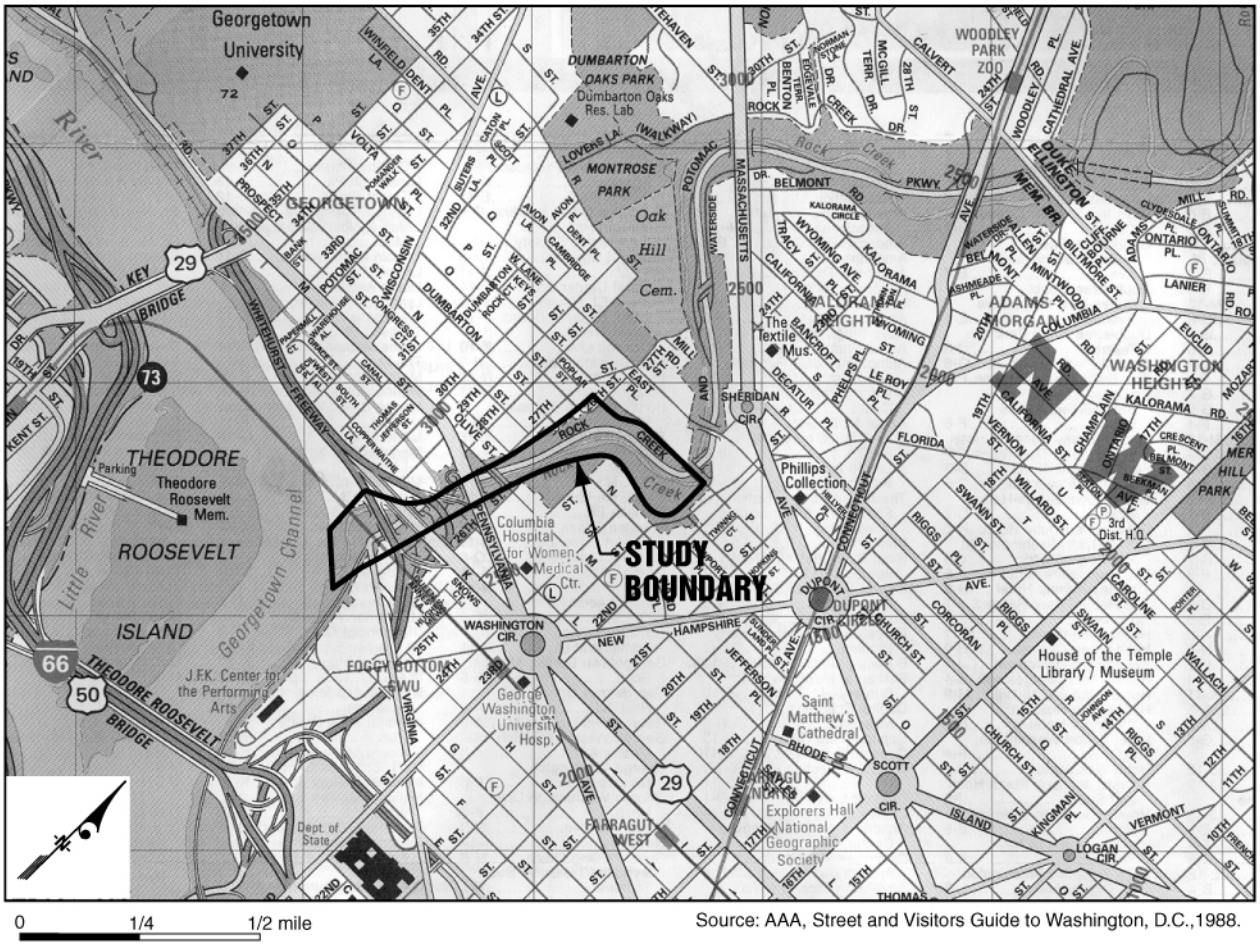


***Figure 1: Area Location Map.***

## PURPOSE OF THE ACTION

The purpose of the project is to increase safety for both bicyclists and motorists, improve the transportation infrastructure for this section of the parkway, provide better drainage, and increase accessibility to the Thompson Boat Center parking area in accordance with the Americans with Disabilities Act. This project would improve visitor experience and use of the park.

## NEED FOR THE ACTION

This project is needed because the asphalt pavement in this section of the parkway is in poor physical condition and many of the parkway features do not meet the National Road Standards or the American Association of State Highway Transportation Officials (AASHTO) standards. One area of the parkway near the P Street Bridge is experiencing poor drainage. These conditions require the National Park Service to take corrective action to extend the useful life of the parkway. In addition, the foot and bike trail is located adjacent to the parkway, and there is no protective barrier between the trail and vehicular traffic on the parkway. This creates a safety issue for commuters, recreational bikers, and pedestrians.

Repairs to the Thompson Boat Center parking area are needed due to the deteriorated condition of the asphalt in the parking area. In addition, the bridge approach has settled, and adjacent walks are uneven creating a safety concern. Continued deterioration of the parking lot and bridge surface would lead to higher rehabilitation costs in the future and could lead to major construction costs to rehabilitate the bridge surface if preventative measures are not taken.

## HISTORY AND SIGNIFICANCE OF THE PARK

Rock Creek Park is an administrative unit of the National Park Service that includes Rock Creek Park proper (Reservation 339), and Rock Creek and Potomac Parkway (Reservation 360). It is located in the northern portion of Washington, DC. It is made up primarily of an undeveloped, wooded valley from the Maryland state line south to the National Zoological Park, with some associated tributaries and uplands; and the 2-mile long Rock Creek and Potomac Parkway from the National Zoological Park to West Potomac Park, where it ends at the Lincoln Memorial Circle (the Park's administration of the parkway ends at Virginia Avenue). Its most notable feature is Rock Creek, which bisects the length of Rock Creek Park and Rock Creek and Potomac Parkway.

The Rock Creek and Potomac Parkway was established in 1913 by the Public Buildings Act. The parkway was created to prevent pollution and obstruction of Rock Creek and to provide a connector between Potomac Park and the Smithsonian National Zoological Park and Rock Creek Park.

The parkway was completed in 1936 and has served as a scenic roadway in and out of Washington, DC. Almost since its opening, the parkway has become a preferred commuter route for many residents of northwest Washington, DC and Montgomery County, Maryland.

The project area is approximately ¾-mile along the parkway from Virginia Avenue to the P Street bridge. It also includes the Thompson Boat Center parking area. Additional information on the project area can be found in the Affected Environment Section.

Figure 2 shows the project area and the study area as they relate to the Rock Creek and Potomac Parkway, the Thompson Boat Center, and the foot and bike trail that follows the parkway. The project area is the limits of construction or the area that is directly impacted if either action alternative were implemented. The study area includes the project area and any area indirectly impacted if either action alternative were implemented. The surrounding neighborhoods may be included in the study area but would be specified in the narrative when that occurs. The National Park Service does not distinguish between direct and indirect impacts when discussing impact analysis, therefore in this document the impact analysis and effected environment discussion apply to the study areas unless otherwise stated.


***Figure 2: Site Location Map***

## PROJECT BACKGROUND & PLANNING

The Denver Service Center, National Park Service commissioned a consultant to complete a comprehensive traffic safety study for Rock Creek Park in March 1997 (Peccia, 1997). Some of the key points of this study as they relate to the rehabilitation project are:

- A total of 657 accidents have been reported along the Rock Creek and Potomac Parkway between 1993 and 1995. Of those, 287 occurred within the project area. This includes the only two fatalities, which were collisions with pedestrians. Current statistics show that from 1996 through 2004 a total of 1,408 accidents have been reported along Rock Creek and Potomac Parkway and of these, 423 were within the project area (personal communication USPP, 2005)

- Traffic volumes show little seasonal variation, and the highest traffic levels correspond to the morning and evening peak commuter periods.

- The Rock Creek and Potomac Parkway from Virginia Avenue to the Whitehurst Freeway has a carrying capacity of more than 65,000 vehicles per day.

The Federal Highway Administration completed an *Engineering Study for Roads and Bridges* (FHWA, 1999) that evaluated the need for and priorities for rehabilitation and reconstruction of the road and bridges within Rock Creek Park. Some of the key recommendations of this study include resurfacing Rock Creek and Potomac Parkway through milling and overlaying; minor drainage improvements and inlet repairs/replacements; and creating an adequate buffer zone between the roadway and the bicycle trail between the M Street and P Street bridges. All of these recommendations have been taken into consideration and addressed within this project.

The Federal Highway Administration also provides highway and bridge design, construction, and inspection services for the National Park Service nationwide. As part of this program, the Federal Lands Highway Division performs bridge inspections on a biennial basis. Bridge inspections for this section of Rock Creek and Potomac Parkway were conducted on June 26, 2001 and June 24, 2003. The Design Scoping Reports completed for this project used the bridge inspections as the basis for their findings. These reports identified severe deterioration of pavement at both approaches and of the asphalt over the piers of the Thompson Boat Center Bridge (US DOT, 2001a, 2003a) and corrective action to the L Street Pedestrian Bridge and the P Street Bridge to prevent additional deterioration (US DOT, 2001d, 2003b,c). All bridges would require regular maintenance to extend their useful life.

A draft *General Management Plan and Environmental Impact Statement for the Rock Creek Park and the Rock Creek and Potomac Parkway* is currently being developed by the National Park Service. The Rehabilitation for Rock Creek and Potomac Parkway project as it is described in this document is referenced in the draft General Management Plan.

In 2003, the Federal Highway Administration in cooperation with the National Park Service hired an engineering firm, Phoenix Engineering, Inc. to complete design and construction plans. These plans address the purpose and need to rehabilitate the Rock Creek and Potomac Parkway and the Thompson's Boat Center parking area. The plans were presented to the NPS, the NPS

environmental consultant firm (HNTB/G&O) and Eastern Federal Lands Highway Division (EFLHD). The design plans along with internal and external scoping were used to conduct resource impact analysis, develop design alternatives, and are the basis for writing this environmental document for the NPS.

## SCOPING

Scoping is the effort to involve agencies, and organizations, and the public in determining the issues to be addressed in the environmental document. Among other tasks, scoping determines important issues and eliminates issues determined not to be important; allocates assignments among the interdisciplinary team members and/or other participating agencies; identifies related projects and associated documents; identifies other permits, surveys, and consultations required with other agencies; and creates a schedule that allows adequate time to prepare and distribute the environmental document for public review and comment before a final decision is made. Scoping is a process that seeks opinions and consultation from any interested agency or agency with legal jurisdiction.

**Internal Scoping**. Internal scoping is an integral part of National Park Service projects. The project team met with the Federal Highway Administration to refine the scope of the project. The project team took into consideration the Design Scoping Reports completed by the Federal Highway Administration in the development of the alternatives presented in this document. In addition, a multidiscipline team meeting was conducted on January 15, 2004 to initiate the Environmental Assessment analysis. At this meeting, the team discussed the project background, existing site conditions, and identified potential issues, feasible alternatives, and potential impacts.

**External Scoping**. The National Park Service consulted with the U.S. Fish and Wildlife Service about any known Federal or State threatened or endangered species or species of concern within the study area and would continue Section 106 consultation with the DC Historic Preservation Office as part of the Environmental Assessment review.

## ISSUES AND IMPACT TOPICS

The National Park Service staff completed an Environmental Screening Form that identifies potential issues and impact topics that require additional investigation to address the requirements of the National Environmental Policy Act of 1969 and Director's Order # 12 (NPS, 2001). These issues were identified from previous park planning efforts, input from various interested public groups and individuals, and input from local, state, and federal agencies.

Resources were considered in accordance with National Park Service 2001 Management Policies (NPS, 2002). The National Park Service manages parks resources to maintain them in an unimpaired condition for future generations in accordance with National Park Service specific statutes, including the Organic Act of 1916 and the National Parks Omnibus Management Act of 1998; general environmental laws such as the Clean Air Act, the Clean Water Act, the Endangered Species Act of 1973, the National Environmental Policy Act, National Historical Preservation Act of 1966, and the Wilderness Act; and applicable regulations.

The National Environmental Policy Act is the basic national charter for protection of the environment. The Act requires federal agencies to use all practicable means to restore and enhance the quality of the human environment and to avoid or minimize any possible adverse effects of their actions upon the environment. Resources include soils, wildlife, habitats, vegetation; cultural, historic, and prehistoric resources, and socioeconomic resources, among others. Additionally, it is the National Park Service's policy to protect the natural abundance and diversity of all naturally occurring communities at the park.

## ISSUES

**Maintaining the Historic Integrity of the Cultural Landscape.** The Rock Creek and Potomac Parkway Historic District (a.k.a. Lower Rock Creek Valley Historic District) is in the process of being listed on the National Register of Historic Places as an area of statewide significance as a historic designed landscape (NPS, 2003). The Rock Creek and Potomac Parkway became a principal component of the comprehensive park system for Washington, DC, which was conceived by the Senate Park Commission. Design and construction of the proposed project must consider potential impacts to the cultural landscape. These resources include bridges and foot and bike trails, as well as other nearby resources contributing to the cultural landscape of the Rock Creek and Potomac Parkway. The rehabilitation of the parkway needs to be conducted in a manner that is consistent with the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Restoring, and Reconstructing Historic Buildings* and the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes.*

**Pedestrians and Bicyclists Safety Along Trail.** A large number of pedestrians, joggers, and bicyclists use the foot and bike trail that parallels the parkway. In several locations, the trail, which follows the existing shoulder of the parkway, is located behind the curb of the southbound roadway, and has no guardrail or barrier between the trail and the road. Relocation and protection of the trail are necessary to improve safety. The issues are improving safety, maintaining the trail access, and protecting trail users during construction.

**Traffic and Access to the Parkway.** The Rock Creek and Potomac Parkway is an integral part of the commuter transportation system leading from Montgomery County, Maryland into Washington, DC. In addition, the parkway is used by residents and tourists to access downtown Washington, DC, the Rock Creek Park and the National Zoological Park.

## IMPACT TOPICS INCLUDED IN THIS DOCUMENT

Impact topics are resources of concern that could be affected, either beneficially or adversely, by the range of alternatives. Impact topics were identified based on federal laws, regulations, Executive Orders, National Park Service Management Policies (NPS, 2002a), the Environmental Screening Form from Director's Order #12 (NPS, 2001), and from the National Park Service knowledge of limited or easily impacted resources. The Environmental Screening Form was completed by the National Park Service staff and identified potential issues and impact topics that required additional investigation to address the requirements of the National Environmental Policy Act of 1969 and Director's Order #12 (NPS, 2001). Specific impact topics were developed to ensure the alternatives were compared based on the most relevant topics. As a means of

evaluation, impact topics included in this document were analyzed in more detail to compare the environmental consequences of the No-Action Alternative and two action alternatives. The impact topics identified on the Environmental Screening Form are explained below.

- **Cultural Landscapes.** The Rock Creek and Potomac Parkway contains natural features and historic resources that contribute to its cultural landscape. Any construction along the parkway must fully consider the potential impacts to the cultural landscape and be preformed in a manner consistent with *Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes.* As a result, Cultural Landscapes was retained for further investigation in this Environmental Assessment.

- **Archeological Resources.** Previous archeological studies conducted near the project area have identified trace archeological materials approximately five feet below grade. The design of the drop inlets have the potential to impact these resources and archeological monitoring would be recommended during construction. Because of the potential for impacts to archeological resources, this topic was carried forward for analysis.

- **Health and Safety.** The National Park Service retained Health and Safety as an impact topic because of the foot and bike trail's close proximity to the parkway and heavy use by pedestrians, joggers, and bicyclists. The National Park Service plans to keep as much of the trail open during construction as possible and as a result, protective measures need to be studied and implemented to ensure the safety of trail users during construction.

- **Vegetation.** The project alternatives have the potential to cause adverse impacts to vegetation along the Rock Creek and Potomac Parkway due to the removal of grassed areas along the shoulder of the parkway. Therefore, this topic was retained for further analysis.

- **Transportation/Traffic.** The Rock Creek and Potomac Parkway is a major commuter transportation route. Construction projects on the Rock Creek Parkway have the potential to cause excessive delays and congestion. As a result, the National Park Service must analyze potential impacts on area traffic and seek ways to minimize the short-term impacts caused by construction. Therefore, this topic was retained for further analysis.

- **Visitor Experience & Use.** The project alternatives have the potential to cause short-term impacts on the visitor experience and use because of trail detours and traffic lane closures necessary for construction. As a result, Visitor Experience and Use was retained for detailed investigation in this document.

## IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS

The non-controversial topics listed below would either not be affected or would be affected negligibly by the alternatives evaluated in this document. Therefore, these topics have been briefly discussed in this section of the Environmental Assessment and then dismissed from further consideration or evaluation. Negligible effects are effects that are localized and at the lowest level of detection.

**WATER RESOURCES**

Rock Creek is a meandering stream approximately 33 miles long that flows south from its source near Laytonsville, MD, to the Potomac River in Washington, DC and is predominantly surrounded by urban and suburban areas in the lower basin of Rock Creek. The greatest regional effects on water quality in Rock Creek are attributed to the increases in urban development with the associated increases in stormwater runoff over impervious surfaces. In the lower segment of the Rock Creek in the District of Columbia where it is under National Park Service administration, major sources of pollutants are discharges from storm sewer and combined sewer outfalls (USGS, 2002; USEPA, 2003; DCDH, 2004). There are three storm sewer outfalls and six combined sewer outfalls in the project area. In addition, there are four combined sewer outfalls immediately upstream of the project area and one below the project area. None of the alternatives would result in changes in the quality or quantity of runoff to Rock Creek. None of the alternatives would result in a net change in the impervious surface associated with the roadway, trail, or parking area.

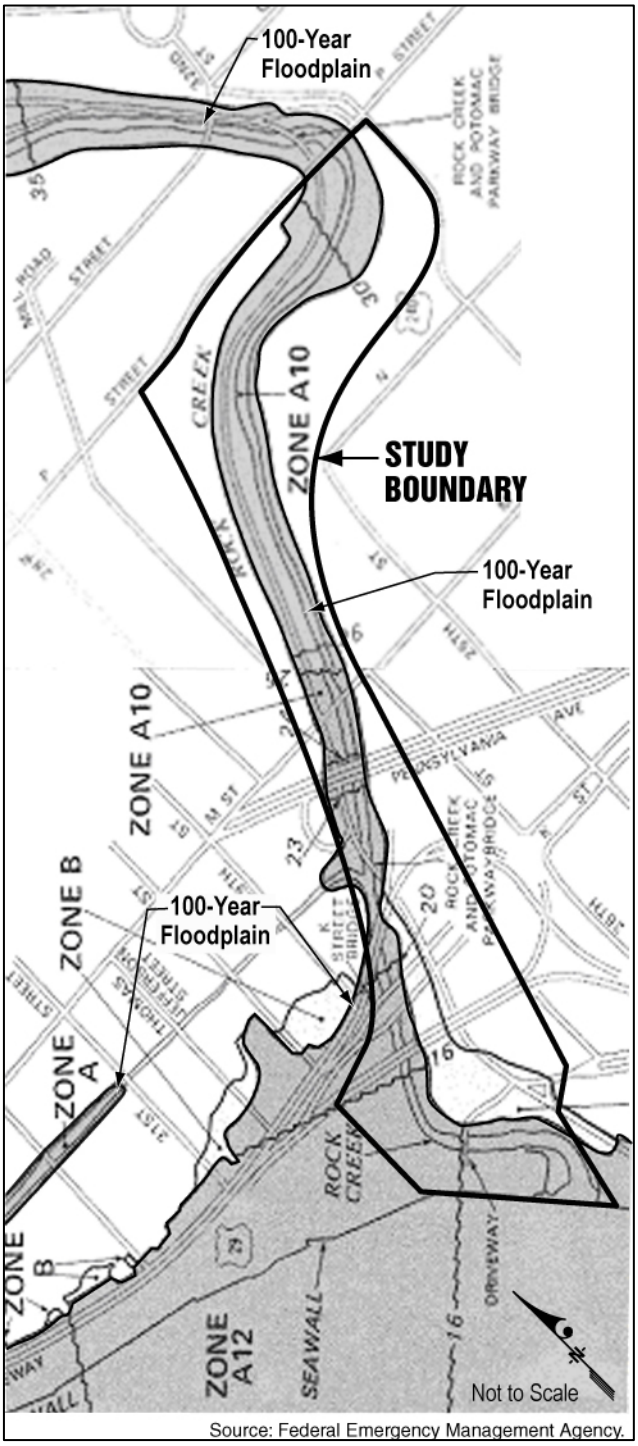


***Figure 3: 100-Year Floodplain.***

Based on a review of the available National Wetland Inventory maps and site visits, no wetlands other than Rock Creek were identified in the project area (USFWS, 2004; DC Guide, 2004). Rock Creek is identified as an open water, tidally influenced riverine wetland system. None of the alternative actions would occur within the Creek and no wetlands would be affected.

The 100-year floodplain of Rock Creek extends along the Creek from the Potomac River upstream beyond the northern limits of the project area (FEMA, 1985). The 100-year floodplain encompasses the Rock Creek and Potomac Parkway project area and the Thompson Boat Center parking area (Figure 3). None of the alternatives result in any barriers constructed in the floodplain, and no change in the area of

impervious ground surface would occur with any of the alternatives. No changes in flood conditions or impacts of flooding would occur as a result of the proposed alternatives.

None of the alternatives presented in this document would affect greater than negligible the water resources in the study area. Therefore, Water Resources was dismissed as an impact topic.

**AIR QUALITY**

Air quality became a national concern in the mid-1960s, leading to the passage of the Air Quality Act in 1967. The Act (now referred to as the Clean Air Act) and subsequent amendments have established procedures for improving conditions, including a set of National Ambient Air Quality Standards.

The U.S. Environmental Protection Agency is directed to set levels for pollutants in order to protect the public health. The National Ambient Air Quality Standards have been adopted for six pollutants: carbon monoxide, nitrogen dioxide, ozone, particulate matter, sulfur dioxide, and lead. A system of monitoring stations has been established across the country to measure progress in meeting these goals. If an area is found to exceed the allowable concentrations, local officials are required to develop a plan for achieving air quality that meets the standards.

The Washington, DC metropolitan area, including the District of Columbia, is not in compliance with the National Ambient Air Quality Standards. Therefore, it is subject to the conformity requirements of the Clean Air Act. The Washington metropolitan area is in non-attainment for ozone, and the region is required to develop a plan to move toward attainment. Similarly, the region had been in non-attainment of the carbon monoxide 8-hour standard, and it is required to show that appropriate air quality control measures are in place to maintain recent air quality improvements.

Impacts associated with rehabilitation of the Rock Creek and Potomac Parkway and the Thompson Boat Center parking area would have negligible short-term, adverse impacts to air quality from construction activities. The transportation/traffic improvements, as they are presented in this document, would have a negligible beneficial impact to the vehicular emissions as result of improved traffic conditions. Therefore, Air Quality was dismissed as an impact topic.

**SOUNDSCAPE MANAGEMENT**

In accordance with the National Park Service Management Policies (NPS, 2000a) and Director's Order #47, Sound Preservation and Noise Management (NPS, 200b), an important objective of the National Park Service's mission is the preservation of natural soundscapes associated with National Park Service units. Natural soundscapes exist in the absence of human caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequencies, magnitudes, and duration of human caused sound considered acceptable varies among National Park Service units. Acceptance levels of noise for each park unit are generally greater in developed areas and less in undeveloped areas.

The rehabilitation of Rock Creek and Potomac Parkway and Thompson Boat Center parking area would result in no long-term differences in noise frequencies, magnitudes, or durations. Several transportation noise sources exist such as vehicular traffic and the flight path of the Ronald Reagan Washington National Airport. Because of the nearby land uses and background levels of noise, the proposed action would have negligible impacts on sound preservation and noise management.

Furthermore, construction activities would have negligible, short-term, adverse impacts on noise levels. If either action alternative were implemented the construction contractor would be required to comply with local noise ordinances. Because either proposed action alternative if implemented would result in negligible, short-term adverse impacts on noise levels during construction and would have negligible, long-term impacts on sound preservation and noise management, Soundscape Management was dismissed as an impact topic.

### LIGHTSCAPE MANAGEMENT

In accordance with National Park Service Management Policies (2001), the National Park Service strives to preserve to the extent possible the quality of lighting associated with natural ambient landscapes and the night sky. The project area already has artificial lights to keep the parkway lit during the nighttime. Both proposed action alternatives would replace-in-kind the existing lighting. Because the proposed action alternatives would have no affect on the existing lightscapes of Rock Creek Park or the Parkway, or result in any long-term or cumulative impacts, Lightscape Management was dismissed as an impact topic.

### AESTHETIC AND VISUAL RESOURCES

Rock Creek Park is an administrative unit of the National Park Service that includes Rock Creek Park proper (Reservation 339) and Rock Creek and Potomac Parkway (Reservation 360). It is located in the northern portion of Washington, DC. The study area consists predominantly of the parkway, foot and bike trails, and various commercial and residential developments.

Either action alternative if implemented, would not change the aesthetic or visual character of Rock Creek Park (Reservation 339) nor the Rock Creek and Potomac Parkway (Reservation 360). Therefore, Aesthetic and Visual Resources was dismissed as an impact topic.

### CULTURAL RESOURCES

Cultural resources are settings we have created in the natural world. They reveal fundamental ties between people and the land and are intertwined patterns of things both natural and constructed (Director's Order #28).

#### *Historic Resources*

The significance of historic resources is generally judged against the resource's ability to meet, at a minimum, one of the four criteria for inclusion on the National Register of Historic Places (36 CFR 60):

- Association with events that have made a significant contribution to the broad patterns of our history; or

- Association with the lives of persons significant in our past; or

- That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

- That has yielded, or may be likely to yield, information important in prehistory or history.

Resources may be eligible for the National Register for contributions at the national, state, or local level. Ordinarily, properties achieving significance within the last 50 years are not considered eligible unless they are integral parts of historic districts or unless they are of exceptional importance. The most common types of resources less than 50 years old listed on the National Register are works of modern architecture or scientific facilities. Additionally, in order for a structure or building to be listed in the National Register, it must possess historic integrity of those features necessary to convey its significance (i.e., location, design, setting, workmanship, materials, feeling, and association see National Register Bulletin #15, *How to Apply the National Register Criteria for Evaluation* (NPS, 1990).

In addition, Rock Creek Park was listed on the National Register of Historic Places as Rock Creek Park Historic District in 1991. The district's boundaries encompass Reservation 339 established as Rock Creek Park on September 27, 1890, which included 31 contributing resources.

The National Park Service in coordination with the DC Historic Preservation Office completed a survey of structures and contributing resources within Rock Creek Park and the Rock Creek and Potomac Parkway that are eligible for listing on the National Register. There is one structure within the study area. The Rock Creek and Potomac Parkway was determined eligible for listing on the National Register and the nomination is currently being finalized.

There is one resource associated with Rock Creek Park and Rock Creek and Potomac Parkway that is within the study area and listed on the National Register of Historic Places. It is the Godey Lime Kilns.

Neither action alternatives would alter those characteristics that make the kilns eligible for listing on the National Register. In addition, action alternative B, if implemented would create no impact while action alternative C, if implemented would only create a negligible, adverse impact to the Rock Creek and Potomac Parkway because it proposes to realign approximately 150 meters of the parkway. The proposed realignment under Alternative C would not alter those characteristics that make the parkway eligible for the National Register. Because there would only be no to negligible impacts to historic resources, this impact topic was dismissed from further consideration.

### *Indian Trust Resources*

The Department of the Interior Secretarial Order 3175 (Departmental Responsibilities for Indian Trust Resources) requires that any anticipated impacts to Indian Trust Resources from a proposed action by Department of the Interior agencies be explicitly addressed in environmental documents. The Federal Indian Trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal law with respect to American Indian and Alaskan native tribes.

Based upon the professional judgment of park staff, Indian Trust Resources do not exist within the project site. The lands are not held in trust by the Secretary of the Interior for the benefit of Indians. Therefore, this impact topic was dismissed from further consideration.

### *Ethnographic Resources*

The National Park Service defines ethnographic resources as any "site, structure, object, landscape or natural resource feature assigned traditional legendary, religious, subsistence or other significance in the cultural system of a group traditionally associated with it" (Director's Order - 28, Cultural Resources Management Guidelines, p. 181). Because no ethnographic resources are known to exist in the study area, Ethnographic Resources was dismissed as an impact topic.

## TOPOGRAPHY, GEOLOGY, AND SOILS

The project area is situated along the eastern and western banks of Rock Creek, extending northward approximately 5,000 feet from the Potomac River. The study area is at the boundary (Fall Line) between the Piedmont and Coastal Plain physiographic provinces. The topography is relatively flat to the east and hilly to the west. The project area is approximately 10 feet above mean sea level at the Thompson Boat Center parking area and rises to approximately 50 feet above mean sea level at P Street (USGS, 1971). The study area is located on graded fill material. Historically, the area was primarily flat marshland of the Coastal Plain with parent material consisting of gravel, sand, silt, and clay lowland deposits. The thickness of the deposits varies from 0 to 150 feet, commonly containing reworked Eocene silts and clays. The northern end of the project area is at the edge of the Piedmont on an area of early Paleozoic material and undifferentiated basaltic rocks (MGS, 2000a, b, c, and d). Alternative B would entail cutting back rock outcrops to accommodate the trail realignment. The impact would be negligible, long-term, and adverse to the geology of the area.

Soils within the site have been substantially altered by the placement of fill material. In 1882, a project to improve navigation of the Potomac River transformed the marshes and tidal flats into riverside recreational areas (USDA, 1976). Dredged sediments from the Potomac River and fill hauled from off site were used in this transformation. Today, mapped soils within the study area are primarily classified as udorthents (U1) and udorthents, loamy (U4) (See Figure 4). These mapping units are characterized by earthy and sandy fill materials that have been placed in poorly drained to somewhat excessively drained soils on uplands, terraces, and floodplains of the Coastal Plain and Piedmont. The thickness of the fill is variable, but typically is more than 20 inches.

Permeability, runoff, and internal drainage tend to be quite variable. In addition, there are two small areas of Manor-Urban Land Complex soils (MdB and MdD). These are Manor loam soils that have been disturbed by the urban development and are on slopes of 0 to 8 percent and 15 to 40 percent, respectively (USDA, 1976).

None of the proposed action alternatives would affect the soils, geology, and topography greater than negligible due to the amount of earth disturbance under the proposed action and the existing highly disturbed nature of the study area. Therefore, Soils, Geology, And Topography were dismissed.

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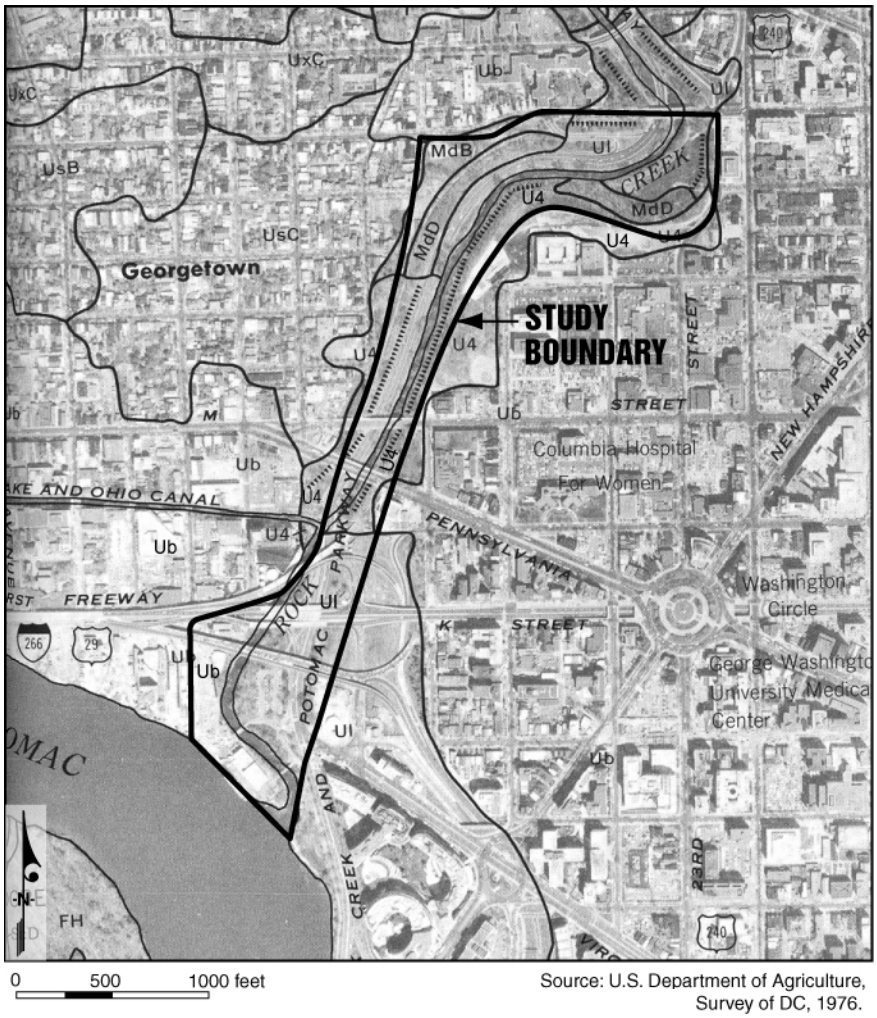


***Figure 4: Soil resources in the project area***

**AGRICULTURAL LANDS, PRIME AND UNIQUE FARMLAND SOILS**

None of the soils mapped within the project area are regulated under the Federal Farmland Protection Policy Act (7 CFR Part 658 of July 5, 1984, as superseded by the Farmland Protection Policy Act Final Rule of June 17, 1994) (USGS, 1971). Additionally, none of the soils are prime farmland soils, unique farmland soils, farmland soils of statewide importance, or identified as hydric soils by the Natural Resource Conservation Service office of the District of Columbia. None of the alternatives would affect agricultural lands, or prime or unique farmlands soils as

defined by the Natural Resource Conservation Service; therefore, these resources were dismissed as an impact topic.

**WILDLIFE**

Birds commonly observed in the study area are those associated with human activity and include house sparrows (*Passer domesticus*), European starlings (*Sturnus vulgaris*), common grackles (*Quiscalus quiscula*), and rock doves (pigeons) (*Colombia livia*). Other species present are those associated with edge habitats created by plantings of trees and shrubs and include northern mockingbirds (*Mimus polyglottos*), American robins (*Turdus migratorius*), blue jays (Cyanocitta cristata), and northern cardinals (*Cardinalis cardinalis*). Canadian geese (*Branta canadensis*), mallard ducks (*Anas platyrhynchos*), and gulls (*Larus spp.*) have adapted to human presence and are common along the Rock Creek and the Potomac River. Mammals present include eastern chipmunks (*Tamias striatus*), gray squirrels (*Sciurus carolinensis*), and occasional Norway rats (*Rattus norvegicus*), house mice (*Mus musculus*), and raccoon (*Procyon lotor*). Trees and shrubs planted for landscaping purposes provide nesting sites, food, and cover for many of the wildlife species present.

Only a short-term negligible disruption would occur to wildlife. The natural landscape and the modified landscape offer great diversity of habitat for identified wildlife to relocate to a more suitable habitat during the short-term disruption. Therefore, Wildlife was dismissed as an impact topic.

**RARE, THREATENED, ENDANGERED, CANDIDATE SPECIES AND SPECIES OF SPECIAL CONCERN**

The U.S. Fish and Wildlife Service and the National Park Service[1] were contacted to determine whether any known critical habitats or listed rare, threatened, or endangered species have been documented in the study area.

According to telephone conversations with the U.S. Fish and Wildlife Service, except for occasionally transient individuals, such as bald eagles (*Haliaeetus leucocephalus*), no proposed or federally listed endangered or threatened species are known to exist within the project area (USFWS, 2004). However, according to research, one federally endangered species, the Hay's Spring amphipod (*Stygobromus hayi*), is known to occur in five springs within Rock Creek Park and the National Zoological Park (Pavek, 2002), but is not believed to be present in the study area.

The National Park Service indicated that there are no records of any threatened or endangered species or rare species near this segment of the Rock Creek and Potomac Parkway or the Thompson Boat Center (NPS, 2004).

[1] The District of Columbia does not maintain their own official list of threatened or endangered species. Therefore, the National Park Service maintains a list for them. Although the National Park Service list is not an official threatened and endangered species list, it is the only list available at this time.

Responses from the U.S. Fish and Wildlife Service and the National Park Service are provided in Appendix A. Based upon the current site conditions and consultation, no known critical habitats or listed rare, threatened, or endangered species or species of concern exist in the study area. Therefore, this impact topic was dismissed from further consideration.

**SOCIO-ECONOMIC ENVIRONMENT**

The social economic environment consists of local, regional, and national businesses; the federal government; the District of Columbia government; residences; the local and regional economy; and tourism. The area surrounding Rock Creek Park, the Rock Creek and Potomac Parkway, and the Thompson's Boat Center consists of parkland, federal buildings, residential structures, and highways. The local economy and businesses include tourism and the federal government. In addition, trucks are not allowed on the parkway.

There would be no change in employment in the area if either action were implemented. Minimal employment opportunities and some related revenues from construction materials are anticipated for the rehabilitation of the parkway and parking area. Minimal economic impacts to area businesses from transportation-impeded access may occur. However, these socio-economic impacts would be short-term, adverse and negligible, with no long-term impacts to the local economies of the surrounding area. Either action alternative if implemented would be expected to have negligible short-term, adverse and no long-term impact on the socio-economic environment; therefore, the Socio-Economic Environment was dismissed as an impact topic.

**LAND USE**

The lower portion of the watershed includes the District of Columbia and its historic suburbs. Most open areas in the surrounding neighborhoods consist of recreational areas, parks, cemeteries, and institutions (e.g., schools and churches). Rock Creek Park administrative unit consists of nearly 3,000 acres within the District of Columbia, including Rock Creek Park, Rock Creek and Potomac Parkway, and the Thompson Boat Center. The project area portion comprises approximately ¾-mile portion of Rock Creek and Potomac Parkway. Based on the USGS National Land Cover Data, land use to the west of the project area is principally Low Intensity Residential while land use to the east is principally High Intensity Residential/Commercial/Industrial (USEPA, 2003). There is little industrial use in the vicinity of the project area and little available area for commercial or residential development. None of the action alternatives would have any impact on land use in the area; therefore, Land Use was dismissed as an impact topic.

**ENVIRONMENTAL JUSTICE**

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations directs federal agencies to identify and address as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority or low-income populations.

According to the 2000 U.S. Census (2000) figures, minorities in Washington, DC, comprises approximately 70 percent of the population and approximately 12 percent of the population is over the age of 65. The percentage of all individuals living below the poverty line in Washington,

DC, is approximately 19 percent, which is slightly higher than the national average of 13 percent. No disproportionate amounts of minorities or low income populations reside adjacent to the study area nor would they be adversely impacted if either action alternative were implemented. Therefore, Environmental Justice was dismissed as an impact topic.

### COMMUNITY FACILITIES AND SERVICES

#### *Emergency Services and Fire and Rescue*

The District of Columbia Fire and Emergency Medical Services Department provides emergency, fire, and rescue services for Washington, DC. Implementing either action alternative would have no affect on existing fire and rescue operations.

#### *Police*

Residents of Washington, DC, are served by the Metropolitan Police Department of the District of Columbia. The U.S. Park Police are the primary responders to incidents occurring on park property and enforce federal laws and regulations. Maintaining the No-Action or implementing either action alternative for the rehabilitation of the Rock Creek and Potomac Parkway and the Thompson Boat Center parking area would have no affect on the existing police services.

#### *Schools*

Based on the review of the District of Columbia Public Schools System, there are no public schools adjacent to the Rock Creek and Potomac Parkway and Thompson Boat Center parking area. The closest public school is located at 1050 21st Street NW, approximately 0.5 mile from the project area. Maintaining the No-Action or implementing either action alternative for the rehabilitation of the Rock Creek and Potomac Parkway and the Thompson Boat Center parking area would have no affect on schools in the area.

#### *Parks and Recreation*

Rock Creek Park is the administering unit for Rock Creek Park, Rock Creek and Potomac Parkway, and the Thompson Boat Center, which is part of the National Park System. The Rock Creek Park administering unit makes up approximately 3,000 acres in northwest Washington, DC. The Rose Park Recreation Center, tennis courts operated by the District of Columbia Parks and Recreation Department, is located along the western edge of Rock Creek Park at 26$^{th}$ and O Streets, NW.

Community facilities and services are anticipated to have negligible, short-term, adverse impacts if either action alternative for the rehabilitation of Rock Creek and Potomac Parkway and the Thompson Boat Center parking area were implemented. Therefore, Community Facilities and Services were dismissed as an impact topic.

### CONCESSION OPERATIONS

The Thompson Boat House is a facility of the National Park Service managed, operated and maintained by a concessionaire, Guest Services, Inc., under a long-term contract. The Thompson Boat Center is open to the public; however, use of the facility is restricted to patrons, which participate in developmental programs, store or launch shells, rent boats or bicycles, or are affiliated with organizations, which are patrons of the Thompson Boat House. The Thompson Boat House's official opening date is March 1 but is weather dependent. The official closing date

is November 15 but again is weather dependent. Over the years, the open season has varied slightly because of weather conditions dictating the closure. During the season, the administrative offices, locker rooms and public restrooms, bays storage compound, and crew bathrooms are open 6:00 a.m. to 8:00 p.m. Monday through Saturday and 7:00 a.m. to 7:00 p.m. on Sundays.

The time of year work restriction for closing access into the Thompson Boat House would minimize impacts on the concessionaire's operations. Access to the Thompson Boat House can only be closed for a period up to 30 days between November 1 and November 30. The adverse impact from construction on the concessions operation would be negligible and short-term because the Thompson Boat House would be closed to public use for the season. The rehabilitation work on the parking lot would be conducted in such a manner that half the parking area would remain open and access to the boat house maintained during the course of construction. The National Park Service would coordinate timing of construction with the concessionaire to minimize interruption of service. As a result, implementation of any of the alternatives would have negligible, short-term, adverse impacts on concessions. Long-term, the improvements to the parking area, access road, and bridge would have a beneficial impact. This long-term beneficial impact on the concession would be negligible and likely not result in a noticeable increase in patronage or use of the facility. As a result, Concession Operations was dismissed as an impact topic in this Environmental Assessment.

**PARK OPERATIONS**

In 2003, Rock Creek Park had an annual operating budget $6,260,000. The park is approximately 3,000 acres and in 2002 recorded over 2 million recreational visits and an estimated 10 to 12 million commuters a year. The National Park Service is responsible for administering, maintaining, operating, and policing the park grounds and its many facilities. Unless otherwise designated, all parkland is open between the hours of sunrise and sunset. The Thompson Boat House is operated by a concessionaire. The U.S. Park Police is responsible for traffic control measures during one way traffic operation conversions for the morning and evening rush hours commutes on Rock Creek and Potomac Parkway.

The section of Rock Creek and Potomac Parkway from Virginia Avenue to P Street represents a small portion of the area of the roadway that administering National Park Service staff is responsible for maintaining. In addition, operation and maintenance activities would not be hampered by the proposed alternatives. As a result, the implementation of any of the action alternatives would have negligible, short-term, and adverse impacts and negligible long-term beneficial impacts on park operations. Therefore, Park Operations has been dismissed as an impact topic in this Environmental Assessment.

**INFRASTRUCTURE**

***Water and Sewer Service***

Water and sewer service in the project area are provided by the District of Columbia Water and Sewer Authority. There are three stormwater outfalls and six combined stormwater and sewer outfalls in the project area. In addition, there are four combined outfalls immediately upstream of the project area and one below the project area. Storm drains from the parkway connect to lines leading to Rock Creek. Sanitary sewer lines and combined stormwater/sewer lines are buried

under the parkway. Water lines are either suspended under (or on) bridges over the parkway. Rehabilitation of the parkway or parking area would not impact the water lines or sewer lines in the project area, although some drop inlets would be constructed or reconfigured along the parkway.

***Electrical Power and Natural Gas***

Electrical power is provided in the area by PEPCO and natural gas is supplied by Washington Gas. Electrical cables and gas lines crossing the area are suspended on bridges over the parkway. Electric cables for parkway lighting are buried along the parkway edge. A 7-foot by 7-foot steam tunnel lies beneath the parkway between the Whitehurst Freeway and M Street. Rehabilitation of the parkway or parking area would not impact the electrical power or gas service in the project area.

***Communication***

Area land-line communication utilities are provided by Verizon. No lines are buried beneath the parkway. Rehabilitation of the parkway or parking area would not impact the communication service in the project area.

***Waste Management***

Solid waste generated from the rehabilitation of the parkway and parking area would be disposed of by a commercial licensed waste management company that would comply with all federal and state requirements. Waste management at the Thompson Boat House is handled by the contract concessionaire.

The existing infrastructure within the project area is anticipated to have a negligible, short-term, adverse impact while sections of the infrastructure are closed during installation of new infrastructure. The existing infrastructure within the project area is anticipated to have a negligible, long-term, beneficial impact if either action alternative were implemented. Therefore, Infrastructure was dismissed as an impact topic.

# ALTERNATIVES

This section describes the Rock Creek Park's management alternatives for the rehabilitation of the Rock Creek and Potomac Parkway and Thompson Boat Center parking area. Alternatives for this project were developed to resolve potential issues associated with safety, drainage, and deteriorating conditions of the pavement.

## ALTERNATIVE A – NO-ACTION

The No-Action Alternative describes the action of continuing the present management operations and conditions. It does not imply or direct discontinuing the present action or removing existing uses, development, or facilities. The No-Action Alternative provides a basis for comparing the management direction and environmental consequences of the alternatives. Should the No-Action Alternative be selected, the National Park Service would respond to future needs and conditions associated with the Rock Creek and Potomac Parkway and the Thompson Boat Center without major actions or changes in present course.

Under the No-Action Alternative, the National Park Service would conduct minor spot repairs to the parkway and Thompson Boat Center parking area, access road, and bridge. The parking surface at the boathouse would not be removed and resurfaced. A comprehensive milling and resurfacing program for the parkway would not be conducted. Neither the foot and bike trail or the parkway would be realigned to separate the trail users from the traffic on the parkway. Bridge repairs along this section of the Parkway would not be conducted, which would not prolong the life of the bridges. Figure 5 shows an existing cross section of the Rock Creek and Potomac Parkway.

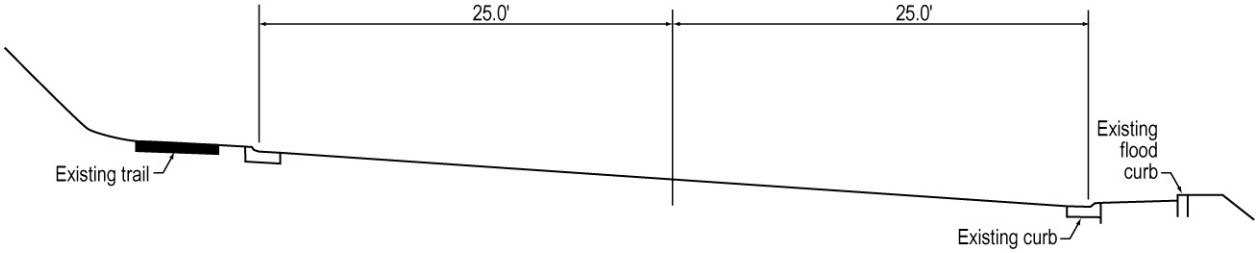


***Figure 5: Existing cross section of Rock Creek and Potomac Parkway***

## ALTERNATIVE B – PARKWAY REHABILITATION WITH TRAIL REALIGNMENT (PREFERRED ALTERNATIVE)

Under Alternative B, the National Park Service would rehabilitate the Rock Creek and Potomac Parkway from Virginia Avenue to P Street. As part of the rehabilitation, the National Park Service would realign a segment of the foot and bike trail away from the parkway. The other primary component of Alternative B is the rehabilitation of the access road, bridge and parking area to the Thompson Boat Center. New drop inlets would be installed along the parkway and at the Thompson Boat Center parking area.

Parkway Rehabilitation

The National Park Service would mill and resurface the parkway from Virginia Avenue to P Street. The existing street lights would be replaced with the same type of pole; however, the type of lighting will be changed to metal halide. New steel-backed timber guardrails would be placed between the parkway and the trail, including placing a 1.5-foot asphalt strip along the guard rail for vegetation control. Existing sections of the guardrail between the Parkway and Rock Creek would be replaced with steel-backed timber, but no new guardrail would be installed on this side of the Parkway. Sections of the parkway with a concrete base would be repaired as necessary. Rumble strips would be added in the median along the entire length of the project to alert motorists crossing the centerline.

Starting at Virginia Avenue heading north to approximately K Street, existing concrete curbs on the island along the Parkway would be replaced with granite curbs, but the stone blocks in the median would be retained. The outside Parkway curbs in this section would also be replaced with granite curbs. Ramps to and from K Street and Pennsylvania Avenue would be milled and overlaid and the curbs would be replaced with concrete curbs. An asphalt sidewalk under the K Street Bridge would be replaced in kind. Minor bridge repairs would occur at the L Street Bridge. The existing curb would be removed and replaced in kind. Drainage improvements would be made to collect a seep area between M Street and P Street. An underdrain would be located behind the curb and would connect to an existing inlet. The curb and gutter along the P Street ramp would be spot replaced as necessary. A new 8-foot wide trail would be constructed on the north side of the P Street access ramp. The pavement on the access ramp to P Street would be removed and replaced.

Realignment of the Foot and Bike Trail

Segments of the foot and bike path would be realigned away from the parkway. The existing asphalt path would be removed and a new trail constructed. The new trail would be either five feet or eight feet in width. Figure 6 shows a typical cross section of the trail removal and relocation. Figure 7 depicts the location of the trail that would be realigned. In one area, the realignment of the trail would require that rock outcrops be cut back. No blasting would be permitted. In addition, steel backed timber guardrails would be added to areas to further protect trail users from the parkway traffic.

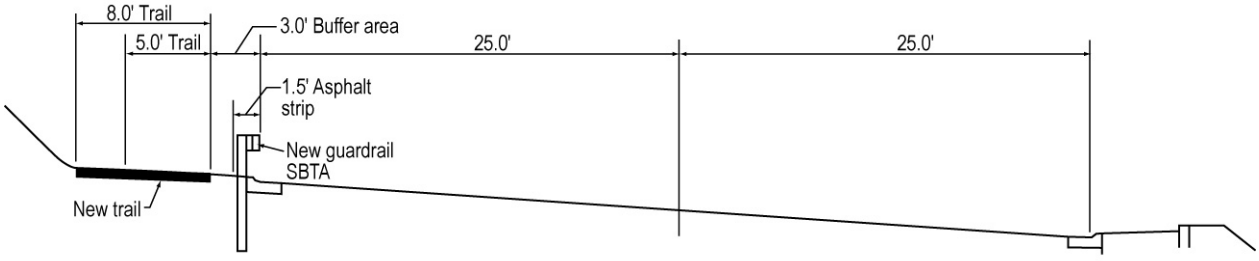


***Figure 6: Cross section of foot and bike trail***


***Figure 7: Location of foot and bike trail realignment***

Thompson Boat Center Parking Area Rehabilitation

The National Park Service would rehabilitate the existing parking area and entrance road to the Thompson Boat Center. Removal of the existing pavement in the parking area may be necessary. The National Park Service would reconstruct the parking area within the existing parking area footprint. The bridge over Rock Creek, curbs, and sidewalk on the bridge would be patched, as necessary. The bridge deck would be overlaid with concrete and sealed. Figure 8 illustrates the location of the proposed improvements.

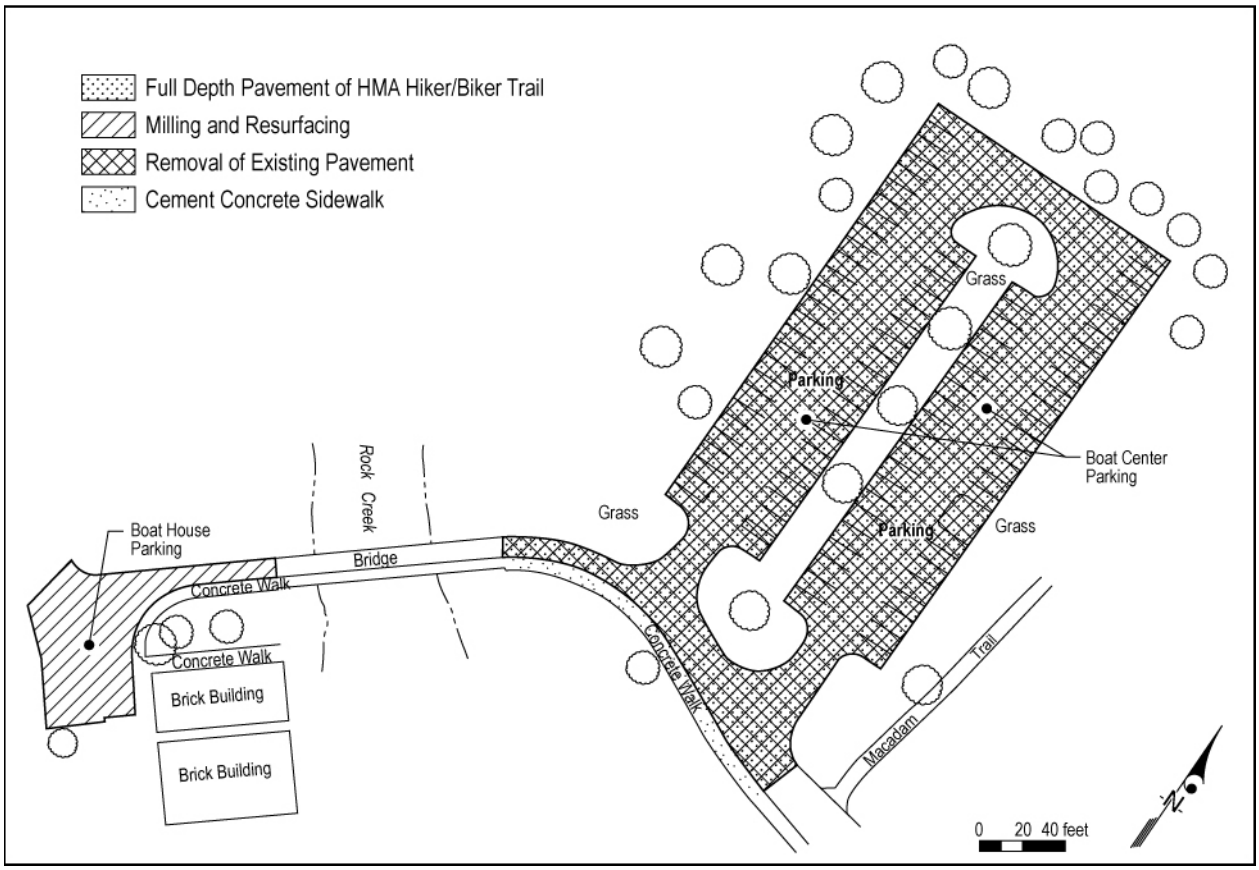


***Figure 8: Thompson Boat Center parking area layout***

NPS/DSC/DEC/821/41022

## ALTERNATIVE C – PARKWAY REHABILITATION WITH ROADWAY REALIGNMENT

Alternative C would be the same as Alternative B except that under Alternative C, the National Park Service would rehabilitate the Rock Creek & Potomac Parkway, and shift the alignment of the parkway closer to Rock Creek rather than realigning a segment of the foot and bike trail. The parkway would be shifted to the east approximately 3 feet closer to Rock Creek from M Street to P Street. This alignment would provide more space between the curb line and the edge of the paved foot and bike trail. The realignment would remain within the existing curb line, which includes the flood curb and Figure 9 shows a cross section view of the realignment of the parkway within the existing curb line. Figure 10 illustrates the location of the parkway realignment. The bike trail would be cleaned, patched, and overlaid.

Alternative C also includes rehabilitation of the Thompson Boat Center parking area, access road and bridge as described under Alternative B.

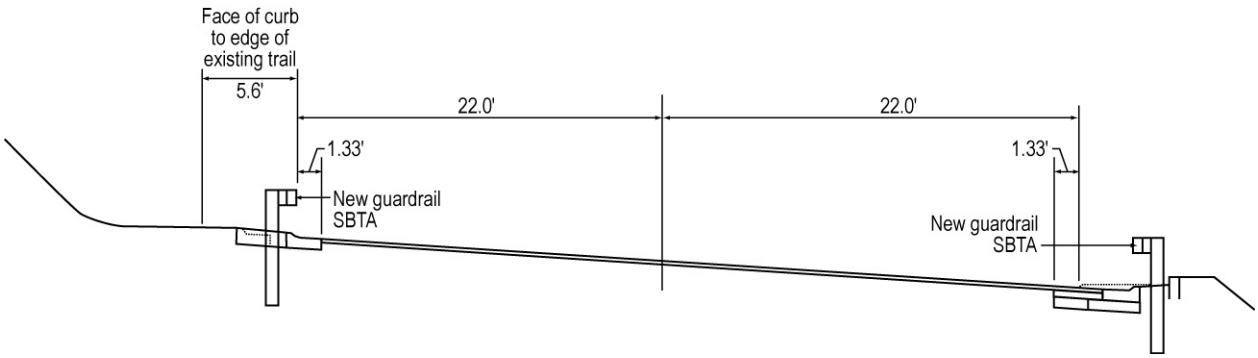


***Figure 9: Cross-section of parkway realignment***

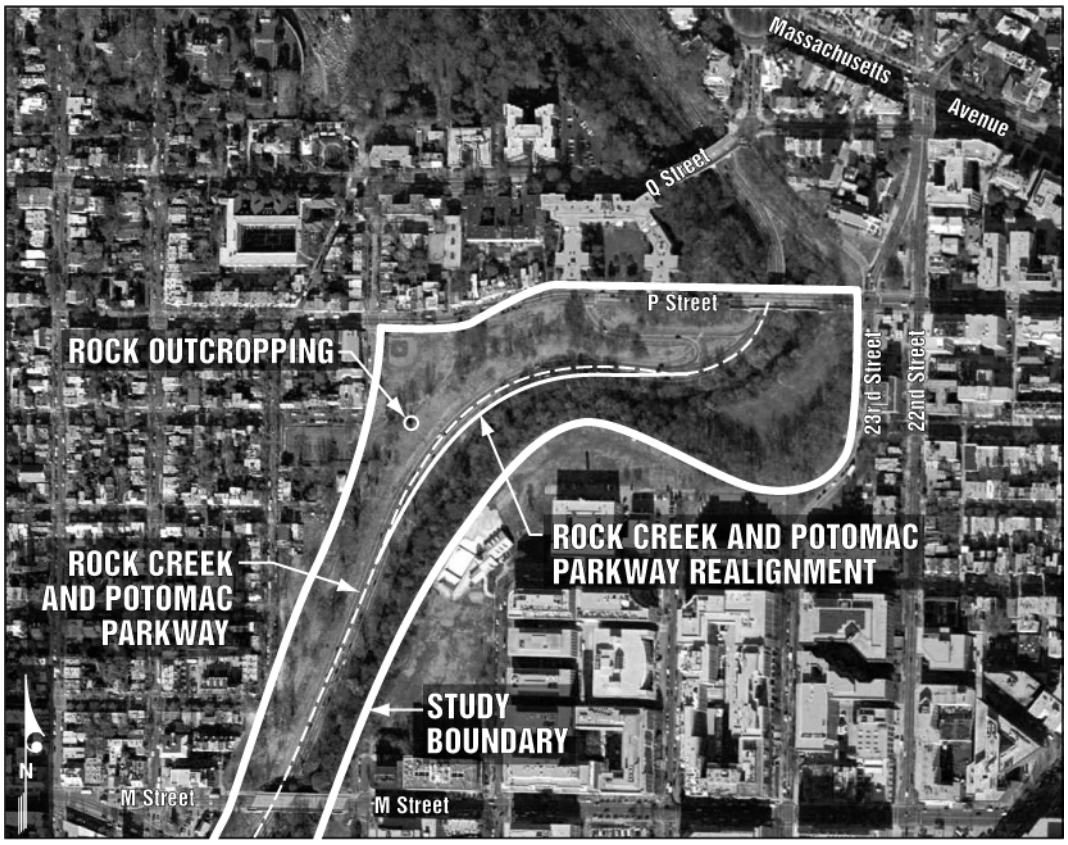


***Figure 10: Location of parkway realignment***

## STAGING AREA

The staging area for construction activities would be located in an open area where it would not affect the operations of the Boat House. It would be located on the east side of the parkway on the south side of the Whitehurst Freeway Bridge between the Bridge and Virginia Avenue. This area was chosen because of its close proximity to the project site, and it is away from the normal trail activities and traffic flow. The potential impacts associated with the staging area were considered in the impact analysis section of this document.

## MITIGATION MEASURES OF THE PREFERRED ALTERNATIVE

Mitigation measures or conditions are presented as part of the Preferred Alternative and have been developed to lessen the adverse effects of the Preferred Alternative. The following mitigation measures are recommended for the implementation of the Preferred Alternative:

- All rehabilitation work would be completed consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (36 CFR 68), the Secretary *of the Interior's Standards for Rehabilitation* (36 CFR Part 67), the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716), and the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (1996).

- An approved National Park Service archeologist would monitor the project area during construction. In the event that potentially significant deposits or features were discovered during this process, work would be halted until finds can be documented, their significance assessed, and appropriate mitigation strategies developed in consultation with the DC Historic Preservation Office and if necessary, a Memorandum of Agreement would be developed.

- In the event that human remains, funerary objects, sacred objects, or objects of cultural patrimony were discovered during the survey or during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3002) of 1990 would be followed. All human remains, funerary objects, sacred objects, or objects of cultural patrimony would be left in place until the culturally affiliated tribe(s) was consulted and an appropriate mitigation or recovery strategy developed.

- A comprehensive traffic control plan would be developed before construction began and implemented during construction. This plan would specify certain work requirements to the contractor. For instance, only two lane closures at one time (one lane in each direction) for the milling and overlay of the parkway and the ramp terminals. The plan would also require that no nighttime construction take place. Other aspects of the traffic control plan include reducing the posted speed to 25 miles per hour and public notification.

- The public would be made aware of trail closures and their need for an alternative route through public media releases two weeks prior to construction, signs would be posted within the project area two weeks in advance, and Variable Message Signs would be used during the first 48 hours of each stage of construction.

- The Thompson Boat Center access road and bridge rehabilitation would only occur for a period up to 30 days between November 1 and November 30 during non-peak visitation periods.

- Before any land disturbing activities can occur a Soil Erosion Control Plan and a Stormwater Management Plan must be completed and submitted to the Sediment and Stormwater Technical Services Branch of the DC Department of Health – Environmental

Health Administration, along with a construction permit application. An erosion and sediment control plan is required for fifty square feet of land disturbance. A storm water management plan is required for five thousand square feet of land disturbance.

- During the rehabilitation of the parking area at the Thompson Boat Center, the access road must remain open and parking permitted in about half of the parking lot.

- All vegetation removed for the realignment of the foot and bike trail would be replaced in kind, including the narcissus bulbs near the rock outcrop that are non-native. (The narcissus bulbs were planted in the 1960s as part of the city-wide Beautification effort and are considered part of the historic planting associated with the parkway.) All other non-native vegetation would be replaced with native species.

## ENVIRONMENTALLY PREFERRED ALTERNATIVE

In accordance with Director's Order #12 (NPS, 2001), the National Park Service is required to identify the "environmentally preferred alternative" in all environmental documents, including Environmental Assessments. The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969, which is guided by the Council on Environmental Quality. The Council on Environmental Quality provides direction that "[t]he environmentally preferable alternative is the alternative that would promote the national environmental policy as expressed in Section 101 of the National Environmental Policy Act, which considers:

1. Fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations;

2. Assuring for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings;

3. Attaining the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;

4. Preserving important historic, cultural, and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice;

5. Achieving a balance between population and resource use that would permit high standards of living and a wide sharing of life's amenities; and

6. Enhancing the quality of renewable resources and approaching the maximum attainable recycling of depletable resources (National Environmental Policy Act, Section 101)."

The No-Action Alternative is not the environmentally preferred alternative because it does not fulfill Criteria 1 through 6 listed above. Specifically, the No-Action Alternative would not assure that the bridge, parkway, and parking area were maintained for each succeeding generation because deterioration of the bridge decking, parking lot, and parkway surface would continue. Safety would be compromised over time because potholes on the road surface would become

more prevalent and would affect safe driving conditions on the parkway. In addition, the close proximity of the trail users to the parkway would not be addressed and safety concerns would persist.

Alternative B fulfills all criteria of the environmentally preferred alternative. The rehabilitation of the parkway and the Thompson Boat Center parking area would fulfill the National Park Service's responsibilities as a responsible trustee of the environment; assure a safe and aesthetically pleasing environment for future generations; achieve a balance between the resource and the population who use the parkway to assure a high standard of living; and enhance the quality of the resource. Moving the trail further away from the parkway would create a safer environment for trail users. In addition, this action would only create a negligible impact to vegetation and wildlife from the placement of a 1.5-foot wide asphalt strip between the parkway and the trail for vegetation control.

Alternative C, while it meets some of the same criteria to be considered the environmentally preferred alternative, it does not attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable consequences (Criteria 3). Moving the alignment of the parkway would reduce the radius of the curve of the road just south of P Street. This would allow for an unsafe environment by creating a sharper curve for motorists to navigate. In addition, this alternative would increase the impact to the floodplain. Therefore, Alternative C is not the environmentally preferred alternative.

## SUSTAINABILITY

The National Park Service has adopted the concept of sustainable design as a guiding principle of facility planning and development. The objectives of sustainability are to design park facilities to minimize adverse effects on natural and cultural values, to reflect their environmental setting, and to maintain and encourage biodiversity; to construct and retrofit facilities using energy-efficient materials and building techniques; to operate and maintain facilities to promote their sustainability; and to illustrate and promote conservation principles and practices through the sustainable design and ecologically sensitive use. Essentially, sustainability is living within the environment with the least impact on the environment.

Rehabilitation of the parkway and the Thompson Boat Center parking area would subscribe to and support the National Park Service's guiding principles on sustainability. The milling and overlaying of a segment of the parkway and resurfacing of the parking area would extend the useful life of the parkway and parking area by 25 to 30 years. In addition, the preferred alternative would create the least impact on the environment.

The No-Action Alternative would not extend the useful life of parkway and parking area. Only minor spot repairs to the parkway and Thompson Boat Center parking lot, access road, and bridge would occur. A comprehensive milling and resurfacing program for the parkway would not be conducted. Continual spot repairs would not create the least impact on the environment. Likewise, Alternative C would also not create the least impact on the environment. By shifting the parkway, greater impact to the floodplain and vegetation and wildlife would occur. Therefore, neither the No-Action Alternative nor Alternative C would subscribe to nor support the National Park Service's guiding principles on sustainability.

## CONSTRUCTION COST AND SCHEDULE

The cost of the project is estimated to be $4 million. The National Park Service plans to begin work on the rehabilitation of the Rock Creek and Potomac Parkway from Virginia Avenue to P Street and the Thompson Boat Center starting in FY 2005.

## ALTERNATIVES CONSIDERED BUT DISMISSED

There were no other feasible alternatives considered, therefore, no alternatives were dismissed from further analysis.

## IMPACT COMPARISON MATRIX

Table 1 compares and contrasts each of the alternatives, including the degree to which each alternative accomplishes the purpose or fulfills the need identified in the purpose and need section. Table 2 presents impacts of the project alternatives, including the No-Action Alternative, for comparison purposes, and a concise summary of each alternative's potential effects by impact topic.

### TABLE 1: COMPARATIVE SUMMARY OF THE NO-ACTION AND ACTION ALTERNATIVES

| Alternative A (No-Action Alternative) | Alternative B Parkway Rehabilitation with Trail Realignment (Preferred Alternative) | Alternative C Parkway Rehabilitation with Roadway Realignment |
|---|---|---|
| Under Alternative A, the National Park Service would continue minor spot repairs to the parkway and Thompson Boat Center parking lot. No comprehensive milling and resurfacing program would be conducted. The foot and bike trail would not be realigned. The parking surface at the Boat Center would not be removed and resurfaced. | Under Alternative B, the National Park Service would realign a segment of the foot and bike trail away from the parkway. The parkway would be milled and resurfaced from Virginia Avenue to P Street and sections of the parkway would be removed and replaced in kind. Existing street lights would be replaced and the existing median at Virginia Avenue would be removed and replaced in kind. Minor bridge repairs to the L Street Bridge would occur and ramps to and from K Street and Pennsylvania Avenue would be milled and overlaid. The realignment of the trail would require that rock outcrops be cut back. Drainage improvements would occur to collect a seep area. The Thompson Boat Center parking area would be reconstructed within the existing footprint. | Alternative C would be the same as Alternative B except the parkway from M Street to P Street would be realigned closer to Rock Creek instead of realigning the trail. |

| Alternative A (No-Action Alternative) | Alternative B Parkway Rehabilitation with Trail Realignment (Preferred Alternative) | Alternative C Parkway Rehabilitation with Roadway Realignment |
|---|---|---|
| **Meets Project Objectives?** No, the No-Action Alternative does not meet the purpose and need for the project. This alternative would not increase safety for trail-users and motorists, would not increase accessibility, and would not provide better drainage. | **Meets Project Objectives?** Yes, Alternative B meets the purpose and need for the project. Alternative B would provide for increase accessibility for visitors with disabilities and would provide better drainage of the parkway. In addition, it would provide increased safety for trail-users and motorists. | **Meets Project Objectives?** No, alternative C would not meet the project objectives. While Alternative C would provide for increased accessibility for visitors with disabilities, would provide better drainage of the parkway, and provide increased safety between trail-users and motorists; it would entail realigning the parkway closer to Rock Creek, which would impact a greater amount of grassed vegetation and have greater impact to the floodplain. |

## TABLE 2: COMPARATIVE SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS

| Impact Topic | Alternative A No-Action Alternative | Alternative B | Alternative C |
|---|---|---|---|
| **Cultural Landscapes** | Continued deterioration of the parkway and the parking area would create a minor, long-term, adverse impact. Minor, long-term, adverse cumulative effects would occur. | Improvements to the parkway and parking area at Thompson Boat Center would have a minor, long-term, adverse effect on the cultural landscape because changes would alter a pattern or feature of the landscape, but would not diminish the overall integrity of the landscape and no new elements are being added to the historic setting. A minor, long-term, adverse cumulative effect would be anticipated. | Because the cultural landscape would be altered, Alternative C would have a minor, long-term, adverse impact on the cultural landscape. A minor, long-term, adverse cumulative effect would be anticipated. |
| **Archeological Resources** | No impact to archeological resources would occur because there would be no ground disturbance activities. The No-Action Alternative would not contribute any increment to cumulative effects. | The National Park Service would mitigate (by monitoring all ground disturbance of previously undisturbed soils) to avoid any adverse impacts to archeological resources associated with the construction of new drop inlets; therefore, no impact to archeological resources would occur. Mitigation strategies would be developed in consultation with the DC Historic Preservation Officer and, if necessary, a Memorandum of Agreement would be developed. Alternative B would not contribute any increment to | Implementation of Alternative C would have the same impact as Alternative B. |

| Impact Topic | Alternative A<br>No-Action Alternative | Alternative B | Alternative C |
|---|---|---|---|
| | | cumulative effects. | |
| **Health and Safety** | Under the No-Action Alternative, impacts would be moderate, long-term, and adverse because the trail would remain close to the roadway without any protective barrier and the deteriorating pavement and bridge conditions would eventually cause road hazards to motorists and boat house users. No adverse cumulative effects would occur. | Alternative B would have moderate, long-term, beneficial impacts on health and safety because of the numerous components designed to improve the safety of the trail, parkway, and Thompson Boat Center parking area. Minor, short-term, adverse impacts would result during construction from temporary trail detours, rerouting of vehicular traffic, and nearby construction activities. Minor, short-term, adverse cumulative effects would occur during construction. A moderate, long-term, beneficial cumulative impact would occur. | Implementation of Alternative C would have the same impacts as Alternative B, except a minor, long-term, adverse impact would occur from relocating the roadway toward Rock Creek. This would reduce the radius of the curve just south of P Street, creating a less safe curve for motorists to navigate. |
| **Vegetation** | Vegetation in this area of the foot and bike trail would not be impacted by the No-Action Alternative as any minor repairs would be in the existing footprint of the parkway. In the area of the Thompson Boat Center parking, visitors have worn deep trails by cutting across the grass causing minor to moderate, long-term, adverse impacts to vegetation. The No-Action Alternative, when added to the actions proposed under the cumulative affect scenario, would contribute an appreciable adverse increment to the minor, long-term, adverse cumulative effects. | Alternative B would create a negligible, short-term, adverse impact to vegetation from the removal of some grassed areas. Minor to moderate, long-term, beneficial impacts would result from removing and replacing the concrete sidewalk. Alternative B, when added to the actions proposed under the cumulative affect scenario, would contribute a negligible adverse increment to the minor, long-term, adverse cumulative effects. | Alternative C would create a minor, long-term, adverse impact to vegetation from the removal of some grassed areas along the parkway. Alternative C, when added to the actions proposed under the cumulative affect scenario, would contribute an appreciable adverse increment to the minor, long-term, adverse cumulative effects. |

| Impact Topic | Alternative A<br>No-Action Alternative | Alternative B | Alternative C |
|---|---|---|---|
| **Transportation/ Traffic** | Under the No-Action Alternative, moderate, long-term, adverse impacts would occur to transportation/traffic because the conditions along the parkway would continue to deteriorate to the point where traffic flows and parking at the Thompson Boat Center would be affected by the poor pavement conditions and the eventual closure of the road to perform a comprehensive milling and overlaying program. The No-Action Alternative, when added to the actions proposed under the cumulative affect scenario, would contribute an appreciable adverse increment to the minor, long-term, adverse cumulative effects. | Overall, implementation of Alternative B would have a moderate, long-term, beneficial impact on transportation/traffic because of the infrastructure improvements. A moderate, short-term, adverse impact would occur to trail access and parkway use because of necessary closures during construction. Impacts would be mitigated, to the degree possible through public notifications and work restrictions during peak use periods. Alternative B, when added to the actions proposed under the cumulative affect scenario, would contribute a negligible beneficial increment to the minor, long-term, beneficial cumulative effects. With proper coordination of construction activities, the short-term, adverse cumulative effect would be minor. | Impacts for Alternative C would be short-term moderate and adverse and minor long-term and adverse because of the sharper curve installed at the parkway. Alternative C, when added to the actions proposed under the cumulative affect scenario, would contribute a negligible adverse increment to the minor, long-term, adverse cumulative effects. With proper coordination of construction activities, the short-term, adverse cumulative effect would be minor. |
| **Visitor Use & Experience** | Under the No-Action Alternative, the parkway pavement would continue to worsen over time and reduce visitor experience. The trail would remain in close proximity to vehicles on the parkway, which also has an adverse impact on visitor experience. Overall, implementation of the No-Action Alternative would have a minor, long-term, adverse impact on visitor experience and use. The cumulative effect on transportation/traffic would be minor, short-term, and adverse. | Overall, Alternative B would have a moderate, long-term, beneficial impact on the visitor experience because of improvements to the road, trail, and parking infrastructure. These improvements would enhance visitor enjoyment at the park and provide visitors with a safer environment. Overall, the cumulative effect on visitor experience and use would be minor, long-term, and beneficial. With coordination of construction activities, the short-term, adverse, cumulative effect would be minor. | Impacts for Alternative C would be minor, long-term, and beneficial because of improvements to the road, trail, and parking infrastructure, but this alternative also proposes a sharper curve installed at the parkway. The short-term impact from Alternative C would be moderate and adverse because the length of construction would be greater causing closures of the parkway for longer periods of time. Overall, the cumulative effect on visitor experience and use would be minor, long-term, and beneficial. With coordination of construction activities, the short-term, adverse, cumulative effect would be moderate. |

# AFFECTED ENVIRONMENT

The project area comprises approximately ¾-mile of Rock Creek and Potomac Parkway. The area consists of parking lots, the parkway, and a foot and bike trail. Rock Creek runs parallel to the parkway along the west side until Pennsylvania Avenue where it crosses under the parkway and runs parallel to the parkway on the east side. Rock Creek shifts to the west side of the parkway again at P Street. The Thompson Boat Center sits to the west of the parkway at Virginia Avenue.

The following provides further description of the specific resources determined as impact topics associated with the rehabilitation of Rock Creek and Potomac Parkway and the Thompson's Boat Center. These impacts topics were determined during internal National Park Service project scoping and in consultation with consultants from Greenhorne & O'Mara, Inc., HNTB, and the Eastern Federal Lands and Highway Division (EFLHD), as topics that may potentially have a greater than negligible adverse or beneficial impact.

## CULTURAL LANDSCAPE

A cultural landscape, as described by the National Park Service's Director's Order #28, *Cultural Management Guidelines* (NPS, 1998), is:

> ..a reflection of human adaptation and use of natural resources and is often expressed the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions.

Thus, cultural landscapes are the result of the long interaction between man and the land, and the influence of human beliefs and actions over time upon the natural landscape. Shaped through time by historical land-use and management practices, as well as politics and property laws, levels of technology, and economic conditions, cultural landscapes provide a living record of an area's past. However, the dynamic nature of modern human life contributes to the continual reshaping of cultural landscapes, making them a good source of information about specific times and places, at the same time rendering their long-term preservation a challenge.

There are four general kinds of cultural landscapes; Historic Sites, Historic Designed Landscapes, Historic Vernacular Landscapes and Ethnographic Landscape (NPS, 1998). The Rock Creek and Potomac Parkway is considered a historic designed landscape.

The Rock Creek and Potomac Parkway Historic District (a.k.a. Lower Rock Creek Valley Historic District) is in the process of being listed on the National Register of Historic Places as an area of statewide significance (NPS, 2003). The Lower Rock Creek Valley has played a role in the developmental history of Washington, DC since its founding in 1791. During the 18$^{th}$ century, the lower valley functioned as a transportation route and a natural boundary for L'Enfant's geometric plan for the new capital. In the 19$^{th}$ century, the valley evolved from a power source for industry to a topographical barrier, and finally, a public dumping ground. In

the early 20th century, the valley became a historic designed landscape. Bridges spanning the valley and water-related resources fostered the physical and economic development of Georgetown and Washington, DC; several bridges represented significant architectural achievements.

The Rock Creek and Potomac Parkway became a principal component of the comprehensive park system for Washington, DC conceived in 1902 by the Senate Park Commission. Consistent with City Beautiful[2] ideals, the parkway linked principal parks in the city. The linear park joined the Mall and Potomac Park to the older National Zoological and Rock Creek Parks.

The Rock Creek and Potomac Parkway is one of the earliest parkways in the nation, the oldest in the metropolitan region, and the first to be federally funded (Congressional legislation, 1913). It is representative of early parkway design in the United States. Although it was initially intended for carriages, horseback riders, pedestrians, and the occasional recreational automobile, early design changes reflected increased automobile traffic. Accordingly, the Rock Creek and Potomac Parkway reflects issues that affected the evolution of American Parkway design. The prolonged design process ensured that the parkway was a collaborative work of several landscape architects, yet the park reflects the guiding vision of Frederick Law Olmsted, Jr. (HABS, 1992). Initially, he proffered the concept as the landscape architect member of the Senate Park Commission.

Accordingly, the Rock Creek and Potomac Parkway meets National Register Criteria A and C in the areas of community planning and development, landscape architecture, architecture, and recreation. The creation of the L'Enfant Plan and the erection of The Arts of Peace define the parkway's period of significance, 1791-1951.

## ARCHEOLOGICAL RESOURCES

Prehistoric and historic objects have been recovered and catalogued from Rock Creek Park proper (Reservation 339) and the Rock Creek and Potomac Parkway (Reservation 360). There are at least 10 archeological sites in the Rock Creek valley with known prehistoric occupations. Two prehistoric archeological sites are known to exist within the project area along the exit ramp for K Street. One site sits on the southbound side of the parkway near the exit ramp for K Street and the other site sits on the northbound side of the parkway. Both sites sit adjacent of the exit ramp from K Street to the Potomac Freeway. Historic archeological sites in the park are mostly associated with historic agricultural and industrial uses during the 18th and 19th centuries. However, due to previous disturbance associated with parkway construction, subsequent rehabilitation and the addition of the paved trail and Thompson's parking lot in the project area, there is low potential for intact subsurface archeological resources at these sites.

[2] The City Beautiful Movement concerned itself with fostering an ordered and cohesive urban identity realized through the sequential arrangement of public spaces, unified groupings of buildings, the use of a monumental scale, and the employment of the Classical language of architecture often expressed in the Beaux Arts style. Although the first decade of the twentieth century marked the heyday of the Movement, interest in the City Beautiful persisted through the 1930s.

Because of the close proximity of the proposed drop inlets to the archeological sites along the exit ramp for K Street and the depth of excavation needed to compensate for the design of the new drop inlets proposed by the District of Columbia, the NPS conducted a Geomorphological Assessment to ascertain whether any original land surfaces with intact cultural resources might still persist. This assessment was conducted along the parkway and at the Thompson Boat Center in the area of the proposed drop inlets on August 27, 2004. Positive samples were found at the Thompson Boat Center parking area and at the intersection of Virginia Avenue and the Rock Creek and Potomac Parkway. There is potential for intact subsurface archeological resources in these two areas, especially in the area of the Thompson Boat Center parking area.

## HEALTH AND SAFETY

A total of 657 accidents have been reported along the Rock Creek and Potomac Parkway between 1993 and 1995. Of those, 287 occurred within the project area. This includes the only two fatalities, which were collisions with pedestrians (Peccia, 1997). One of the safety concerns in the project area is the proximity of the foot and bike trail to the parkway (See Figure 11). Currently, there is no protective barrier between the trail and vehicular traffic on the parkway. This creates a safety concern for commuters, recreation bikers, and runners. In addition, the bridge approach to the Thompson Boat House has settled and adjacent walks are uneven creating a safety concern (See Figure 12).

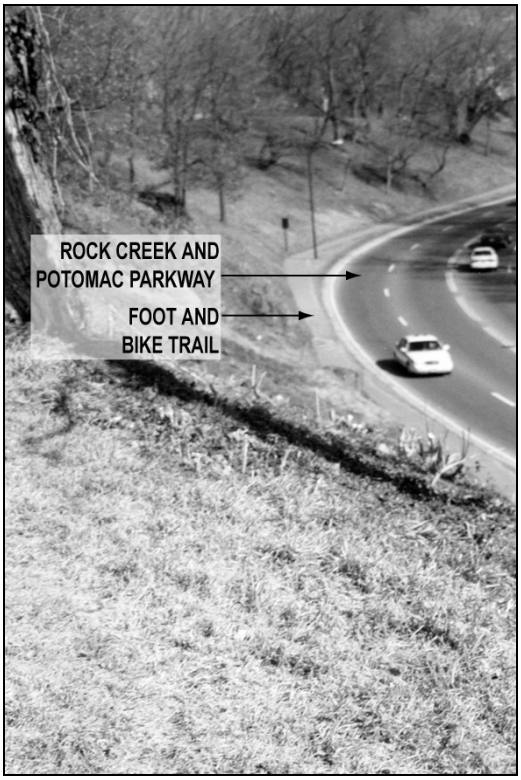


***Figure 11: Foot and Bike Trail Proximity to Parkway***

***Figure 12: Thompson Boat Center Bridge***

## VEGETATION

Most wetland vegetation that naturally occurred along Rock Creek has been eliminated and replaced with seeded and transplanted species as the land and site were developed. The selection of species used for landscaping has been based primarily on aesthetics and growth characteristics and includes native species as well as non-native species that have been introduced from other regions of the United States and other continents. Common trees in the project segment of the Rock Creek and Potomac Parkway and the Thompson Boat Center area include oaks (*Quercus spp.*), maples (*Acer spp.)*, sycamore (*Platanus occidentalis*), apples (*Malus spp*.), hickory (*Carya spp*.), elm (*Ulmus sp*.), pear (*Pyrus sp.*), and willow (*Salix sp.*).

## TRANSPORTATION/TRAFFIC

Roadway Characteristics. Rock Creek and Potomac Parkway is one of the principal roads within Rock Creek Park as well as an important commuter route for local residents accessing metropolitan DC. The Rock Creek and Potomac Parkway is approximately 2.5 miles in length and extends from West Potomac Park to Calvert Street (NPS GMP/EIS, 2002). The parkway is a four lane limited access road with a posted speed limit of 35 miles per hour. Typical of parkways, commercial vehicle and truck use is prohibited on the parkway. A paved foot and bike trail parallels the parkway and is located on the west side of the parkway.

The Rock Creek and Potomac Parkway is characterized by a well defined roadway clear zone containing few fixed elements (Peccia, 1997). Typically, the only fixed objects located within the clear zone are light standards, post-mounted traffic signs, and bridge supports. The parkway was constructed with a curb and gutter used for surface water drainage. The curb and gutter carry surface water to drop inlets spaced along the length of the roadway. The Parkway is a lighted corridor as well as additional lighting at intersections and interchanges, and one stop light at Virginia Avenue.

A comprehensive transportation study for Rock Creek Park was completed by Robert Peccia and Associates in 1997. For the purposes of this evaluation, it was assumed that traffic conditions are similar to the 1997 study with one exception, the average daily traffic volumes have increased from 10 to 20 percent due to growth in the DC metropolitan (FHWA, 2003). The 2002 traffic volumes were reviewed and are presented in the following section.

The Federal Highway Administration Federal Lands Highway Division provides highway and bridge design, construction, and inspection services for the National Park Service nationwide. As part of this program, the Federal Lands Highway Division performs bridge inspections on a biennial basis. Bridge inspections for this section of Rock Creek and Potomac Parkway were conducted on June 26, 2001. The Design Scoping Reports completed for this project used the bridge inspections as the basis for their findings. These reports revealed severe deterioration of pavement at both approaches and of the asphalt over the piers of the Thompson Boat Center Bridge (US DOT, 2001a). They also recommended corrective action to the P Street Bridge to prevent additional deterioration (US DOT, 2001d). All bridges would require regular maintenance to extend their useful life.

Traffic Volumes. Traffic volumes show little seasonal variation and the highest traffic levels correspond to the morning and evening peak commuter periods. To accommodate peak periods, all lanes are designated as one way southbound during the morning (6:45 a.m. to 9:30 a.m.) and one way northbound during the evening (3:45 p.m. to 6:30 p.m.) commute. It should be noted that changing the parkway to one way is a very labor intensive process conducted by the U.S. Park Police.

Rock Creek and Potomac Parkway from Virginia Avenue to the White Hurst Freeway has a carrying capacity of more than 65,000 vehicles per day based on counts conducted in the spring of 2002 (FHWA, 2003). Directly south of Virginia Avenue, the daily traffic volume on the northbound lane was 39,900 vehicles and southbound lane near the Thompson Boat Center was 29,500 vehicles (FHWA, 2003). These two areas represent the highest traffic volumes and are closest to Metropolitan DC.

Parking. Rock Creek Park has a total parking capacity near 1,800 vehicles (Peccia, 1997). All of which are located north of P Street with the exception of the Thompson Boat Center parking area. The Thompson Boat Center parking area has 92 available metered parking spaces. The average weekday occupancy of the parking area is 52 percent, and the average weekend occupancy of the parking area is 68 percent. The average weekday duration at the Thompson Boat Center parking area is 2 hours and 45 minutes, and the average weekend duration is 2 hours. This data was obtained from surveys, which were conducted in August 1996 from 8:00 a.m. to 8:00 p.m. (Peccia, 1997).

## VISITOR EXPERIENCE AND USE

The Rock Creek Park General Management Plan describes the traditional character and visitor experience of Rock Creek Park. Rock Creek was intended to be a “pleasure ground” according to its establishing legislation. Visitors come for the scenery experience that accompanies a forested creek valley.

The Rock Creek Park management unit offers a wide array of visitor experiences and recreational opportunities that include paved multi-use trails, an extensive system of hiking and horse back riding trails, an 18 hole golf course, tennis courts, scenic roads, picnic areas, sports fields, community gardens, the Thompson Boat House, Rock Creek Horse Center, Carter Barron Amphitheater (NPS GMP/EIS, 2002). The management unit also administers several historic sites, parks with distinctive designs and individual character, a cemetery, and cares for a variety of outdoor sculpture. The Rock Creek and Potomac Parkway, a reservation of Rock Creek Park proper, is described in the park’s General Management Plan as “an aesthetically pleasing landscape [that provides] visitors a sense of relaxation.” The visitor experience of the parkway includes frequent encounters with other visitors and heavy traffic along the parkway is accepted. The parkway views include natural and historic features that are typical of the parkway design. The specific recreational opportunities along the parkway between Virginia Avenue and P Street include motorized and non-motorized activities such as driving, walking, bicycling, and in-line skating.

In 1997, visitor surveys were conducted as part of the *Transportation Study Rock Creek Park, Washington, DC*. For the segment of the foot and bike trail south of P Street, the average

weekday hourly volume was 112 visitors, and the average weekend hourly volume was 166 visitors. The visitor use classification was also recorded. The average percent of weekday users was distributed as 45 percent pedestrian, 54 percent bicyclist, and 2 percent in-line skaters (Peccia, 1997). During the weekend, this distribution was 28 percent pedestrian, 70 percent bicyclist, and 2 percent in-line skaters (Peccia, 1997).

The visitors using Rock Creek Park proper are primarily local residents. However, because of its designation as a national park, the park also attracts a considerable amount of tourists visiting the area. Recreational visits to the park is highest in the warmer months and drops off in late fall and winter when temperatures begin to restrict outside activities. Non-recreational visits are consistent through the course of the year. These visits are mainly commuters traveling along the parkway and make up about 25 percent of the total visitation occurring each season (NPS GMP/EIS, 2002).

# ENVIRONMENTAL CONSEQUENCES

## INTRODUCTION

This section describes the environmental consequences associated with each action alternative. It is organized by impact topics, which refine the issues and concerns into distinct topics for discussion analysis. These topics allow a standardized comparison between the alternatives based on their impact to the environment. The National Environmental Policy Act of 1969 requires consideration of type, context, duration, intensity, and direct, indirect, and cumulative impacts. National Park Service policy also requires that "impairment" of park resources be evaluated in all environmental documents.

## METHODOLOGY FOR ASSESSING IMPACTS

Potential impacts are described in terms of:

- Type - are the effects beneficial or adverse,
- Context - are the effects site-specific, local, or regional,
- Duration - are the effects short-term, lasting less than one year, or long-term, lasting more than one year, and
- Intensity - are the effects negligible, minor, moderate, or major.

In this Environmental Assessment, the intensity of impacts is evaluated within a local context (i.e., project area or study area – see definitions on page 3), while the intensity of the contribution of effects to cumulative effects is evaluated in a regional context (i.e., Washington, DC and suburbs). Because definitions of intensity (negligible, minor, moderate, major) vary by impact topic, intensity definitions are provided separately for each impact topic analyzed in this environmental assessment. National Park Service policy requires that direct and indirect impacts be considered, but not specifically identified. Direct effect is caused by an action and occurs at the same time and place. Indirect effect is caused by an action later in time or farther removed in distance, but still reasonably foreseeable.

### IMPAIRMENT TO PARK RESOURCES AND VALUES

In addition, the National Park Service's *Management Policies, 2001* (2000a) require analysis of potential effects to determine whether actions would impair park resources. The fundamental purpose of the National Park System, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts to park resources and values. However, the laws do give the National Park Service the management discretion to allow impacts to park resources and values when necessary and as appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has

given the National Park Service the management discretion to allow certain impacts, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the best professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values. An impact to any park resource or value may constitute an impairment; however, an impact would more likely constitute an impairment to the extent that it has a major adverse effect upon a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified as a goal in the park's general management plan or other relevant National Park Service planning documents.

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. A determination on impairment is made for each impact topic in this section. The National Park Service does not analyze visitor experience and use, socioeconomic values, or park operations for impairment.

## CUMULATIVE EFFECTS

The Council on Environmental Quality regulations, which implement the National Environmental Policy Act, requires assessment of cumulative effects in the decision-making process for federal projects. Cumulative effects are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative effects are considered for all alternatives and are presented at the end of each impact topic discussion analysis.

### PROJECTS THAT MAKE UP THE CUMULATIVE EFFECTS SCENARIO

As part of the analysis and consideration of potential cumulative impacts, other past, present, and reasonable foreseeable projects were identified. For each project, the National Park Service considered the potential cumulative effect when combined with the potential impacts of rehabilitating Rock Creek and Potomac Parkway and Thompson's Boat Center parking area. The brief overview of the projects identified in the immediate area follows. Those that have the potential for cumulative effects are discussed further in the impact analysis.

- **Kennedy Center Access Improvements.** The Federal Highway Administration is proposing to improve access to the John F. Kennedy Center for the Performing Arts in Washington, DC. The project would include both transportation and urban design improvements. This would include:

- a new pedestrian signal for crossing Rock Creek and Potomac Parkway;
- new bridge over Ohio Drive for Potomac Freeway;
- realignment and signalization at the Ohio Drive/Potomac Freeway/Rock Creek and Potomac Parkway intersection to relieve congestion; and
- modification of the ramp linking eastbound Roosevelt Bridge to southbound Ohio Drive and northbound Rock Creek and Potomac Parkway.

An Environmental Assessment was submitted for public review and comment during October 2003. Construction of various parts of the project may be conducted during the construction of the Rehabilitation to the Rock Creek and Potomac Parkway from Virginia Avenue to P Street, which would create the potential for cumulative effects.

- **Swedish Embassy.** The Swedish Embassy is proposing to construct the "House of Sweden" on 30th Street at K Street, NW, which is on the west side of Rock Creek near the Thompson Boat House. For this project, the Swedish Embassy would construct two buildings. The north building would house an exhibition area, an auditorium, conference facilities, and some residences. The south building would house the chancery, and the bottom two floors would be leased. Construction is expected to be completed by 2006 and would create the potential for short-term cumulative effects.

- **DC Department of Public Works Bridge Rehabilitations.** The DC Department of Public Works is conducting two bridge rehabilitations for the Virginia Avenue and the P Street bridges. Work on the P Street Bridge is currently completed. Based upon discussions with DC Department of Public Works, work on the Virginia Avenue Bridge would not occur during the proposed project. No short-term, cumulative effects would occur.

- **Rehabilitation of Rock Creek and Potomac Parkway and Beach Drive from P Street to the Maryland State line.** In cooperation with the Federal Highway Administration, the National Park Service is looking at similar rehabilitative measures along the parkway and Beach Drive from P Street to the Maryland State line. The next project scheduled is from P Street to Calvert Street followed by a project from Beach Drive to the Maryland State Line. These projects would occur after construction is completed for this project. No short-term, cumulative effects would occur, but there is the potential for long-term, cumulative effects.

- **East-West Travel Study.** The DC Department of Public Works is beginning a travel study to look at improving travel across Rock Creek Park from Dupont Circle to Military Road. This study would look at improving multi-modal access without creating new bridges and/or roads. This study is to begin within the next few months. There is the potential for long-term, cumulative effects.

- **Georgetown Waterfront Park.** A new park would be created on approximately 10 acres of land along the Potomac River. This new park would connect the 225 miles of

public parkland that runs from the terminus of the Chesapeake & Ohio Canal, in Cumberland, Maryland to historic Mount Vernon, Virginia. This new park would consist of open lawns, informal gardens, trails for walkers and joggers, overlooks and boat launches, and a new bike path that would connect Rock Creek Park with the Capital Crescent trail. This project would begin in the near future. There is the potential for short-term and long-term cumulative effects.

## IMPACTS TO CULTURAL RESOURCES AND SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

In this environmental assessment/assessment of effect, impacts to cultural landscape resources are described in terms of type, context, duration, and intensity, which is consistent with the regulations of the Council on Environmental Quality (CEQ) that implement the National Environmental Policy Act (NEPA). These impact analyses are intended, however, to comply with the requirements of both NEPA and Section 106 of the National Historic Preservation Act (NHPA). In accordance with the Advisory Council on Historic Preservation's regulations implementing Section 106 of the NHPA (36 CFR Part 800, *Protection of Historic Properties*), impacts to cultural landscapes were identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that are either listed in or eligible to be listed in the National Register of Historic Places; (3) applying the criteria of adverse effect to affected cultural resources either listed in or eligible to be listed in the National Register; and (4) considering ways to avoid, minimize or mitigate adverse effects.

Under the Advisory Council's regulations, a determination of either *adverse effect* or *no adverse effect* must also be made for affected, National Register eligible cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the National Register, e.g. diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the preferred alternative that would occur later in time, be farther removed in distance or be cumulative (36 CFR 800.5, *Assessment of Adverse Effects*). A determination of *no adverse effect* means there is an effect, but the effect would not diminish in any way the characteristics of the cultural resource that qualify it for inclusion in the National Register.

CEQ regulations and the National Park Service's *Conservation Planning, Environmental Impact Analysis and Decision Making* (Director's Order #12; NPS, 2001) also call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact, e.g. reducing the intensity of an impact from major to moderate or minor. Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation under NEPA only. It does not suggest that the level of effect as defined by Section 106 is similarly reduced. Cultural resources are non-renewable resources and adverse effects generally consume, diminish, or destroy the original historic materials or form, resulting in a loss in the integrity of the resource that can never be recovered. Therefore, although actions determined to have an adverse effect under Section 106 may be mitigated, the effect remains adverse.

A Section 106 summary is included in the impact analysis sections for cultural landscapes and archeology. The Section 106 summary is intended to meet the requirements of Section 106 and is an assessment of the effect of the undertaking (implementation of either action alternative) on cultural resources, based upon the criterion of effect and criteria of adverse effect found in the Advisory Council's regulations.

## IMPACTS ON CULTURAL LANDSCAPES

### DEFINITION OF INTENSITY LEVELS

In order for a cultural landscape to be listed in the National Register, it must meet one or more of the following criteria of significance: A) associated with events that have made a significant contribution to the broad patterns of our history; B) associated with the lives of persons significant in our past; C) embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction; D) have yielded, or may be likely to yield, information important in prehistory or history (*National Register Bulletin, How to Apply the National Register Criteria for Evaluation*). The landscape must also have integrity of those patterns and features - spatial organization and land forms; topography; vegetation; circulation networks; water features; and structures/buildings, site furnishings or objects - necessary to convey its significance (*Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes*). For purposes of analyzing potential impacts to cultural landscapes, the thresholds of change for the intensity of an impact are defined as follows:

- *negligible*: Impact(s) is at the lowest levels of detection - barely perceptible and not measurable. For purposes of Section 106, the determination of effect would be *no adverse effect*.

- *minor*: Adverse impact – impact(s) would alter a pattern(s) or feature(s) of the cultural landscape but would not diminish the overall integrity of the landscape. For purposes of Section 106, the determination of effect would be *no adverse effect*.

  beneficial impact – preservation of landscape patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes.* For purposes of Section 106, the determination of effect would be *no adverse effect.*

- *moderate*: Adverse impact - impact(s) would alter a pattern(s) or feature(s) of the cultural landscape, diminishing the overall integrity of the landscape. For purposes of Section 106, the determination of effect would be *adverse effect*. A Memorandum of Agreement is executed among the National Park Service and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council on Historic Preservation in accordance with 36 CFR 800.6(b). The mitigation measures identified in the Memorandum of Agreement reduce the intensity of impact from major to moderate.

  beneficial impact – rehabilitation of a landscape or its patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties With*

*Guidelines for the Treatment of Cultural Landscapes*. For purposes of Section 106, the determination of effect would be *no adverse effect.*

- *major*: Adverse impact - impact(s) would alter a pattern(s) or feature(s) of the cultural landscape, diminishing the overall integrity of the resource. For purposes of Section 106, the determination of effect would be *adverse effect*. The National Park Service and applicable state or tribal historic preservation officer would be unable to negotiate and execute a Memorandum of Agreement in accordance with 36 CFR 800.6(b).

  beneficial impact – restoration of a landscape or its patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes*. For purposes of Section 106, the determination of effect would be *no adverse effect.*

*Duration*: Short-term – Effects lasting for the duration of the construction activities (less than 1 year); Long-term – Effects lasting longer than the duration of the construction (longer than 1 year).

**ALTERNATIVE A - NO-ACTION ALTERNATIVE**

The rehabilitation of the Rock Creek Park and Potomac Parkway and the Thompson Boat Center parking area would not occur under the No-Action Alternative. Continued deterioration of the parkway and the parking area would create a minor, long-term, adverse impact.

Cumulative Effects. Under the No-Action Alternative the rehabilitation of the Rock Creek Park and Potomac Parkway and the Thompson Boat Center parking area would not occur. Planned future road improvements such as the Kennedy Center Improvements and the DC Department of Public Works Bridge Rehabilitation combined with the No-Action Alternative would have no cumulative effect. Rehabilitation of Rock Creek and Potomac Parkway from P Street, NW to the Maryland State line, the East-West Travel Study, and the Georgetown Waterfront Park may impact the cultural landscape. Therefore, when added to the No-Action Alternative a minor, long-term, adverse cumulative effect on the cultural landscape would occur.

Conclusion. The rehabilitation of the Rock Creek Park and Potomac Parkway and the rehabilitation of the Thompson Boat Center parking area would not occur under the No-Action Alternative. Continued deterioration of the parkway and the parking area would create a minor, long-term, adverse impact. Minor, long-term, adverse cumulative effects would occur.

**ALTERNATIVE B – PARKWAY REHABILITATION WITH TRAIL REALIGNMENT (PREFERRED ALTERNATIVE)**

Under Alternative B, the improvements to the parkway between Virginia Avenue and P Street would have no impact on the cultural landscape because the improvements would not add new components to the historic setting of the project area. Realigning the trail, removing the outcropping of rocks, adding new guardrails, adding rumble strips, and replacing the stone curb would change the landscape. These changes would create a minor, long-term, adverse impact on the cultural landscape under the National Environmental Policy Act. The impact would be minor because the changes the impact would alter or add to an existing pattern and/or feature of the

cultural landscape, but it would not diminish the overall integrity or historic setting of the landscape.

Improvements to the parking area at Thompson Boat Center would have no impact on the cultural landscape because no new elements would be added to the historic setting. Accessibility to the parking area would be improved.

All rehabilitation work would be consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (36 CFR 68), the *Secretary of the Interior's Standards for Rehabilitation* (36 CFR Part 67), the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716).

Cumulative Effects. Under Alternative B, Rock Creek and Potomac Parkway, from Virginia Avenue to P Street, would be rehabilitated and the trail realigned creating minor changes to the cultural landscape. Planned future road improvements such as the rehabilitation of Rock Creek and Potomac Parkway from P Street, NW to the Maryland State line, the East-West Travel Study, and the Georgetown Waterfront Park may impact the cultural landscape. Therefore, when added to Alternative B a minor, long-term, adverse cumulative effect on the cultural landscape would occur. Kennedy Center improvements and the DC Department of Public Works Bridge Rehabilitation projects combined with the Alternative B would have no cumulative effect.

Conclusion. Improvements to the parkway and parking area at Thompson Boat Center would have a minor, long-term, adverse effect on the cultural landscape because changes would alter or add to an existing pattern and/or feature of the cultural landscape, but it would not diminish the overall integrity of the landscape. A minor, long-term, adverse cumulative effect would be anticipated.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Rock Creek and Potomac Parkway; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Section 106 Summary. In accordance with Section 106 of the National Historic Preservation Act, implementation of Alternative B would have *no adverse effect* on the cultural landscape. No adverse effect to the cultural landscape would occur because Alternative B would not alter those characteristics that make the parkway eligible for the National Register.

After applying the Advisory Council on Historic Preservation's criteria of adverse effect (36 CFR 800.5), the National Park Service proposes that implementing Alternative B would have no adverse effect on the cultural landscape. The National Park Service, pursuant to Section 106, has initiated consultation with the District of Columbia State Historic Preservation Office to obtain their concurrence on this determination.

**ALTERNATIVE C - PARKWAY REHABILITATION WITH ROADWAY REALIGNMENT**

Under Alternative C, the parkway, between Virginia Avenue and P Street, would be rehabilitated and realigned. The road between P Street and K Street was previously widened in 1957. This alternative would include realigning the parkway, adding new guardrails, adding rumble strips, and replacing the stone curb that would change the landscape. These changes would create a minor, long-term, adverse impact because the landscape would be altered, but it would not diminish the overall integrity of the resources.

All rehabilitation work would be consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (36 CFR 68), the *Secretary of the Interior's Standards for Rehabilitation* (36 CFR Part 67), the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716).

Cumulative Effects. Under Alternative C, Rock Creek and Potomac Parkway, from Virginia Avenue to P Street, would be rehabilitated and a portion of the parkway realigned creating changes to the cultural landscape. Planned future road improvements such as the rehabilitation of Rock Creek and Potomac Parkway from P Street, NW to the Maryland State line, the East-West Travel Study, and the Georgetown Waterfront Park may impact the cultural landscape. Therefore, when added to Alternative C a minor, long-term, adverse cumulative effect on the cultural landscape would occur. Kennedy Center improvements and the DC Department of Public Works Bridge Rehabilitation projects combined with the Alternative C would have no cumulative effect.

Conclusion. Because the cultural landscape would be altered, Alternative C would have a minor, long-term, adverse impact on the cultural landscape. A minor, long-term, adverse cumulative effect is anticipated to occur.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Rock Creek and Potomac Parkway; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Section 106 Summary. In accordance with Section 106 of the National Historic Preservation Act, implementation of Alternative C would have an *adverse effect* on the cultural landscape. Alternative C would alter a primary design element, which would slightly diminish the integrity of the cultural landscape; therefore, it has the potential to affect its overall integrity.

After applying the Advisory Council on Historic Preservation's criteria of adverse effect (36 CFR 800.5), the National Park Service proposes that implementing Alternative C would have an adverse effect on the cultural landscape. The National Park Service pursuant to Section 106 has initiated consultation with the District of Columbia State Historic Preservation Office to get their concurrence on this determination.

## IMPACTS TO ARCHEOLOGICAL RESOURCES

### DEFINITION OF INTENSITY LEVELS

In order for an archeological resource to be eligible for the National Register of Historic Places it must meet one or more of the following criteria of significance: A) associated with events that have made a significant contribution to the broad patterns of our history; B) associated with the lives of persons significant in our past; C) embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction; D) have yielded, or may be likely to yield, information important in prehistory or history. In addition, the archeological resource must possess integrity of location, design, setting, materials, workmanship, feeling, association (*National Register Bulletin, Guidelines for Evaluating and Registering Archeological Properties*). For purposes of analyzing impacts to archeological resources either listed in or eligible to be listed in the National Register, the thresholds of change for intensity of an impact are defined below:

- *negligible*: Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for Section 106 would be no adverse effect.

- *minor:* Adverse impact — disturbance of a site(s) results in little, if any, loss of integrity. The determination of effect for Section 106 would be no adverse effect. Beneficial impact — maintenance and preservation of a site(s). The determination of effect for Section 106 would be no adverse effect.

- *moderate:* Adverse impact — disturbance of a site(s) results in loss of integrity. The determination of effect for Section 106 would be adverse effect. A memorandum of agreement is executed among the NPS and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council on Historic Preservation in accordance with 36 CFR 800.6(b). Measures identified in the memorandum of agreement to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate. Beneficial impact — stabilization of a site(s). The determination of effect for Section 106 would be no adverse effect.

- *major*: Adverse impact — disturbance of a site(s) results in loss of integrity. The determination of effect for Section 106 would be adverse effect. Measures to minimize or mitigate adverse impacts cannot be agreed upon and the NPS and applicable state or tribal historic preservation officer and/or Advisory Council are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b). Beneficial impact — active intervention to preserve a site(s). The determination of effect for Section 106 would be no adverse effect.

*Duration*: Short-term – Effects lasting for the duration of the construction activities (less than 1 year); Long-term – Effects lasting longer than the duration of the construction (longer than 1 year).

**ALTERNATIVE A – NO-ACTION ALTERNATIVE**

Under the No-Action Alternative, no ground-disturbing activities would take place outside the footprint of the Rock Creek and Potomac Parkway or the Thompson Boat Center. Therefore, no impact to archeological resources would occur.

Cumulative Effects. Because there are no impacts to archeological resources associated with the No-Action Alternative, the No-Action Alternative would not contribute any increment to cumulative effects.

Conclusion. The No-Action Alternative would not involve any ground disturbance; therefore, no impact to archeological resources would occur. The No-Action Alternative would not contribute any increment to cumulative effects.

**ALTERNATIVE B – PARKWAY REHABILITATION WITH TRAIL REALIGNMENT (PREFERRED ALTERNATIVE)**

Parkway Rehabilitation

Under Alternative B, the parkway would be milled and overlaid, sections with a concrete base would be repaired as necessary, and ramps to K Street and Pennsylvania Avenue would be replaced. The District of Columbia has requested new drop inlets be constructed along the parkway lane to handle the combined stormwater and sewer flows. Because there would be a high probability of additional undisturbed prehistoric and historic archeological resources within Rock Creek Park, impacts from implementing Alternative B on archeological sites in the park are unknown. However, due to previous disturbances associated with construction of the Rock Creek and Potomac Parkway, there would be low potential for intact subsurface archeological resources. In the area of the two prehistoric archeological sites, any construction would take place on the parkway in areas of previous disturbance. Therefore, these improvements would not have an impact on archeological resources.

Realignment of the Foot and Bike Trail

Realigning the trail, removing the outcropping of rocks, adding new guardrails, adding rumble strips, and replacing the stone curb would not have an impact on archeological resources because the construction of the Rock Creek and Potomac Parkway has altered the original landscape in this area and any construction would take place in areas of previous disturbance. In addition, this section of the parkway is not located in the area of the two prehistoric archeological sites. Therefore, no potential for intact subsurface archeological resources exists.

Thompson Boat House Parking Area Rehabilitation

Under this alternative, the parking area, bridge and access road at the Thompson Boat Center would be rehabilitated. The existing parking area and entrance to the boat house would be milled and overlaid, and the bridge deck, curbs and sidewalk would be patched, as necessary. Furthermore, the District of Columbia has requested new drop inlets be constructed at the intersection of the Virginia Avenue/Rock Creek and Potomac Parkway and the Thompson Boat Center parking area to handle the combined stormwater and sewer flows. The construction of

drop inlets might have the potential to impact intact archeological resources due to the depth of excavation required for the drop inlets and their close proximity to two prehistoric archeological sites. However, an approved National Park Service archeologist would monitor the site during ground disturbance. In the event that deposits or features are discovered during this process, work would be halted until finds can be documented, their significance assessed, and appropriate mitigation strategies developed in consultation with the DC Historic Preservation Office. If necessary, a Memorandum of Agreement would be developed.

Because the National Park Service would mitigate to avoid any adverse effects to archeological resources no major adverse impacts would occur.

Cumulative Effects. Because there are no impacts to archeological resources associated with Alternative B, Alternative B would not contribute any increment to cumulative effects.

Conclusion. The National Park Service would mitigate to avoid any major adverse impacts to archeological resources associated with the construction of new drop inlets; therefore, no impact to archeological resources would occur. Mitigation strategies would be developed in consultation with the DC Historic Preservation Officer and, if necessary, a Memorandum of Agreement would be developed. Alternative B would not contribute any increment to cumulative effects.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Rock Creek and Potomac Parkway; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Section 106 Summary. In accordance with Section 106 of the National Historic Preservation Act, implementation of Alternative B would have *no adverse effect* on the archeological resources. No major adverse impact to archeological resources would occur because the National Park Service would mitigate to avoid any major adverse impacts to archeological resources associated with the construction of new drop inlets. Mitigation strategies would be developed in consultation with the DC Historic Preservation Officer and if necessary, a Memorandum of Agreement would be developed. In the event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during the survey or during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3002) of 1990 would be followed. All human remains, funerary objects, sacred objects, or objects of cultural patrimony would be left in place until the culturally affiliated tribe(s) was consulted and an appropriate mitigation or recovery strategy developed.

#### ALTERNATIVE C – PARKWAY REHABILITATION WITH ROADWAY REALIGNMENT

The impacts under Alternative C would be the same as described under Alternative B.

Cumulative Effects. Cumulative effects under Alternative C would be similar to those described under Alternative B.

Conclusion. The National Park Service would mitigate to avoid any major adverse impacts to archeological resources associated with the construction of new drop inlets; therefore, no major adverse impact to archeological resources would occur. Mitigation strategies would be developed in consultation with the DC Historic Preservation Officer and, if necessary, a Memorandum of Agreement would be developed. Alternative C would not contribute any increment to cumulative effects.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Rock Creek and Potomac Parkway; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Section 106 Summary. In accordance with Section 106 of the National Historic Preservation Act, implementation of Alternative C would have *no adverse effect* on the archeological resources. No major adverse impact to archeological resources would occur because the National Park Service would mitigate to avoid any major adverse impacts to archeological resources associated with the construction of new drop inlets. Mitigation strategies would be developed in consultation with the DC Historic Preservation Officer and if necessary, a Memorandum of Agreement would be developed. In the event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during the survey or during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3002) of 1990 would be followed. All human remains, funerary objects, sacred objects, or objects of cultural patrimony would be left in place until the culturally affiliated tribe(s) was consulted and an appropriate mitigation or recovery strategy developed.

## IMPACTS ON HEALTH AND SAFETY

### DEFINITION OF INTENSITY LEVELS

Analyses of the potential intensity of impacts on health and safety were derived from the available information on the parkway, and the professional judgment of the park staff. The thresholds of change for the intensity of impacts on health and safety are defined as follows:

- *negligible*: Health and safety would not be affected, or the effects would be at low levels of detection and would not have an appreciable effect on health or safety.

- *minor:* The effect would be detectable, but would not have an appreciable effect on health and safety. If mitigation was needed, it would be relatively simple and would likely be successful.

- *moderate:* The effects would be readily apparent and would result in substantial, noticeable effects to health and safety on a local scale. Mitigation measures would probably be necessary and would likely be successful.

- *major:* The effects would be readily apparent and would result in substantial, noticeable effects to health and safety on a regional scale. Extensive mitigation measures would be needed and their success would not be guaranteed.

*Duration*: Short-term – Effects lasting for the duration of the construction activities (less than 1 year); Long-term – Effects lasting longer than the duration of the construction (longer than 1 year).

**ALTERNATIVE A - NO-ACTION ALTERNATIVE**

Under the No-Action Alternative, the National Park Service would continue management actions that would include minimum spot repairs to maintain the parkway and Thompson Boat Center parking area, access road, and bridge. A comprehensive milling and resurfacing program for the parkway would not be conducted. Neither the foot and bike trail nor the parkway would be realigned to separate the trail users from the traffic on the parkway. The parking surface at the Boat Center would not be milled and overlaid. Motorists and trail users would continue to be at risk because of the close alignment of the trail to the traffic on the southbound lanes of the parkway. In addition, the parkway pavement and the parking lot, bridge and access road at the Thompson Boat Center would continue to deteriorate, causing a potential hazard for motorists and boat house users. The combination of trail location and pavement and bridge deterioration would have a moderate, long-term, adverse impact on health and safety.

Cumulative Effects. Under the No-Action Alternative the rehabilitation of Rock Creek and Potomac Parkway and the Thompson Boat Center parking area would not occur. Planned future road improvements such as the Kennedy Center Improvements and the DC Department of Public Works Bridge Rehabilitation, rehabilitation of Rock Creek and Potomac Parkway from P Street, NW to the Maryland State line, and the East-West Travel Study may beneficially impact health and safety. The No-Action Alternative would not contribute to these beneficial impacts; therefore, no cumulative effects would occur.

Conclusion. Under the No-Action Alternative, impacts would be moderate, long-term, and adverse because the trail would remain close to the roadway without any protective barrier and the deteriorating pavement and bridge conditions would eventually cause road hazards to motorists and boat house users. The No-Action Alternative would not contribute to the beneficial impacts of other proposed projects; therefore, no cumulative effects would occur.

**ALTERNATIVE B – PARKWAY REHABILITATION WITH TRAIL REALIGNMENT (PREFERRED ALTERNATIVE)**

Parkway Rehabilitation

Under Alternative B, the parkway would be milled and overlaid, sections with concrete base would be repaired as necessary, and ramps to K Street and Pennsylvania Avenue would be replaced. These improvements would have a moderate, long-term, beneficial impact on health and safety by improving road conditions for motorists.

The steel backed timber guardrails that would be placed between the parkway and the trail would meet current AASHTO standards. In addition, rumble strips would be placed along the center

line of the roadway throughout the entire length of the project. These improvements would have a moderate, long-term, beneficial impact on health and safety of motorists traveling on the parkway by reducing the potential for vehicles to leave the roadway or cross into oncoming traffic.

Mitigation measures such as restrictions on road closures during peak periods, and vehicular traffic controls would be implemented to minimize the risk to motorists during construction. Signage and barriers would be used to protect construction workers from traffic during construction. With this mitigation, the potential risk of safety related incidents would be low. As a result, the proposed alternative with mitigation would have a minor, short-term, adverse impact on health and safety during construction.

Realignment of the Foot and Bike Trail

The trail realignment would allow the National Park Service to spatially and physically separate trail users from southbound traffic on the Rock Creek and Potomac Parkway. The separation of the trail from the road and installation of the guardrails would have a moderate, long-term, beneficial impact on safety by reducing the risk of accidents between trail users and motorists.


***Figure 13: Rose Park Trail***

During construction, the portion of the trail from approximately K Street to P Street would be closed for approximately two months. Another trail (the Rose Park Trail) would be accessed at the M Street and P Street overpasses, and it would be parallel to the existing NPS portion of the foot and bike trail (see Figure 13). Trail users could use the Rose Park Trail while the existing trail is closed during construction (approximately two months). Rose Park Trail can be accessed from both P and M Streets. Barriers would be installed with warning/closure signs to minimize the risk to trail users during construction. With this mitigation, the potential risk of safety related incidents would be low. As a result, the proposed alternative with mitigation would have a minor, short-term, adverse impact on health and safety during construction and a moderate, long-term, beneficial impact on health and safety.

Thompson Boat Center Parking Area Rehabilitation

Under Alternative B, the parking area, bridge and access road at the Thompson Boat Center would be rehabilitated. The existing parking area and entrance to the boat house would be milled and overlaid, and the bridge deck, curbs and sidewalk would be patched, as necessary. In addition, the bridge deck would be sealed. These changes would increase visitor safety at the boat house by improving the parking lot, access road, and bridge surfaces. Therefore, a moderate, long-term, beneficial impact on health and safety would occur.

Cumulative Effects. Kennedy Center access improvements would be completed at the same time as Alternative B. Therefore, there would be a minor, short-term, adverse cumulative impact on health and safety because parkway and Kennedy Center users would have to navigate around construction in the area. The improvements to the Rock Creek and Potomac Parkway from P Street, NW to the Maryland State line to include Beach Drive and the DC Department of Public Works Bridge Rehabilitations would not add to these short-term, adverse cumulative effects because Alternative B would not occur at the same time.

The improvements to the Rock Creek and Potomac Parkway from P Street, NW to the Maryland State line and the DC Department of Public Works Bridge Rehabilitations along with Alternative B would have a moderate, long-term, beneficial impact on health and safety because these projects would cumulatively improve safety for users of the parkway and the foot and bike trail. The Georgetown Waterfront Park would not impact health and safety; therefore, no cumulative effect would occur.

Conclusion. Implementation of Alternative B would have moderate, long-term, beneficial impacts on health and safety because of the numerous components designed to improve the safety of the trail, parkway, and Thompson Boat Center parking area. Minor, short-term, adverse impacts would result during construction from temporary trail detours, rerouting of vehicular traffic, and nearby construction activities. Mitigation measures would minimize short-term impacts. Minor, short-term, adverse cumulative effects would occur during construction. A moderate, long-term, beneficial cumulative impact would occur.

Because there would be no major adverse impact to resources or values whose conservation are: (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Rock Creek and Potomac Parkway; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

**ALTERNATIVE C – PARKWAY REHABILITATION WITH ROADWAY REALIGNMENT**

Parkway Rehabilitation

Under Alternative C, improvements to the condition of the parkway and the addition of features such as the steel backed timber guardrails and rumble strips would have the same moderate, long-term beneficial impacts as those described under Alternative B.

Mitigation measures for Alternative C would be the same as those described under Alternative B.

Realignment of the Parkway

The new road alignment would allow the National Park Service to spatially and physically separate trail users from southbound traffic on the Rock Creek and Potomac Parkway. The separation of the trail from the road and installation of the guardrails would have a moderate, long-term, beneficial impact on safety by reducing the risk of accidents between trail users and motorists.

However, relocating the roadway toward Rock Creek would reduce the radius of the curve just south of P Street, creating a sharper curve for motorists to navigate (See Figure 14). This change would have a minor, long-term adverse impact on safety of motorists traveling the parkway.

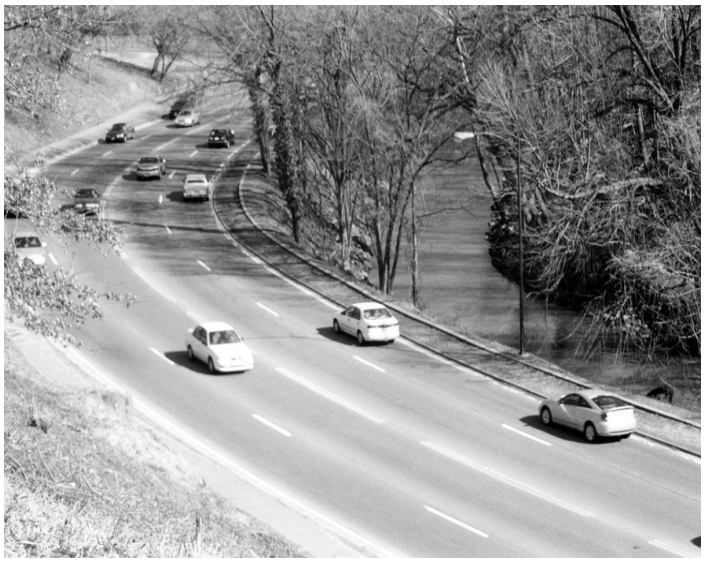

***Figure 14: Existing Curve South of P Street, N.W.***

Mitigation measures such as restrictions on road closures during peak periods, and vehicular traffic control measures would be implemented to minimize the risk to motorist and trail users during construction. With this mitigation, the potential risk of safety related incidents would be low. Alternative C with mitigation would have a minor, short-term, adverse impact on health and safety during construction, and a minor or moderate, long-term, beneficial impact to motorists and trail users, respectively.

Thompson Boat Center Parking Area Rehabilitation

Impacts for Alternative C would be the same as those proposed for Alternative B.

Cumulative Effects. Cumulative effects for Alternative C would be the same as those proposed for Alternative B.

Conclusion. Implementation of Alternative C would have a minor to moderate, long-term, beneficial impact on health and safety because of the numerous components designed to improve the safety of the parkway and the Thompson Boat Center bridge, access road, and parking lot improvements. However, minor, long-term, adverse impacts would occur from relocating the roadway toward Rock Creek by reducing the radius of the curve just south of P Street, creating a sharper curve for motorists to navigate. Minor, short-term, impacts could result during construction from temporary trail detours, rerouting of vehicular traffic, and nearby construction activities. Minor, short-term, adverse cumulative effects would occur during construction. Mitigation measures would minimize short-term impacts. A moderate, beneficial, long-term, cumulative impact would occur.

Because there would be no major adverse impact to resources or values whose conservation are: (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Rock Creek and Potomac Parkway; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

# IMPACTS ON VEGETATION

## DEFINITION OF INTENSITY LEVELS

Available information on vegetation and vegetative communities potentially impacted by the proposed alternatives was compiled. To the extent possible, location of sensitive vegetation species, populations, and communities were identified and avoided. Predictions about short-term and long-term impacts to vegetation were based on previous experience of projects of similar scope and vegetative characteristics. Analyses of the potential intensity of impacts on vegetation were derived from the available information on the parkway and the professional judgment of the park staff. The thresholds of change for the intensity of impacts on vegetation are defined as follows:

- *negligible*: Native vegetation would not be affected, or some individual native plants would be affected as a result of the alternative, but there would be no effect on native species populations. The effects would be on a small scale and no species of special concern would be affected.

- *minor:* The alternative would affect some individual native plants and would also affect a relatively small portion of that species population. Mitigation to offset adverse effects, including special measures to avoid affecting species of concern, would be required and would be effective.

- *moderate:* The alternative would affect some individual native plants and would also affect a sizeable segment of the species population and over a relatively large area. Mitigation to offset the adverse effects could be extensive, but would likely be successful. Some species of special concern could be affected.

- *major:* The alternative would have a considerable effect on native plant populations, including species of special concerns, and could affect a relatively large area in and outside of the park. Mitigation measures to offset the adverse effects would be required, extensive, and success of the mitigation measures would not be guaranteed.

*Duration*: Short-term – Effects lasting less than 3 years; Long-term – Effects lasting longer than 3 years.

## ALTERNATIVE A - NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the National Park Service would continue management actions that would include minor repairs to the parkway, Thompson Boat Center parking area, and the foot and bike trail. The foot and bike trail would remain near the shoulder of the parkway and would not be realigned away from the roadway. Vegetation in this area of the Rock Creek and Potomac Parkway would not be impacted by the No-Action Alternative as any minor repairs would be in the existing footprint of the parkway. However, in the are of the Thompson Boat Center Parking Area, visitors have worn deep trails by cutting across the grass. The grass is worn away and the tails have become deeply impacted causing a minor to moderate, long-term, adverse impact to vegetation in this area.

Cumulative Effects. Other past, present, or reasonably foreseeable future actions such as construction activities associated with the Kennedy Center access improvements, rehabilitation of the parkway from P Street to the Maryland State line, construction of a new Swedish Embassy, and the Georgetown Waterfront Park may have the potential to have a long-term, adverse impact from the removal of existing vegetation. The No-Action Alternative, when added to these actions, would contribute a noticeable increment to the minor, long-term, adverse cumulative effects.

Conclusion. Vegetation in this area of the foot and bike trail would not be impacted by the No-Action Alternative as any minor repairs would be in the existing footprint of the parkway. In the area of the Thompson Boat Center parking, visitors have worn deep trails by cutting across the grass causing minor to moderate, long-term, adverse impacts to vegetation. The No-Action Alternative, when added to the actions proposed under the cumulative affect scenario, would contribute a noticeable increment to the minor, long-term, adverse cumulative effects.

**ALTERNATIVE B – PARKWAY REHABILITATION WITH TRAIL REALIGNMENT (PREFERRED ALTERNATIVE)**

Parkway Rehabilitation

Under Alternative B, rehabilitation of the parkway would impact the vegetation of Rock Creek Park and the Rock Creek and Potomac Parkway. Rehabilitation efforts would only be conducted on the existing footprint of the parkway except for the addition of a 1.5-foot wide asphalt strip along the guardrail for vegetation control and from the relocation of the bike trail. The asphalt strip would require the removal of some grassed areas. This impact would be negligible, long-term, and adverse as no species of special concern would be impacted nor would there be an affect on native populations.

Realignment of the Foot and Bike Trail

The realignment of the foot and bike trail require the removal of some grassed areas and may require the removal and replacement of 1 to 2 small diameter trees at the P Street ramp. Non-native vegetation would be replaced with native vegetation except the narcissus bulbs near the rock outcrop that would be replaced in kind (the narcissus bulbs were planted in the 1960s as part of the city-wide Beautification effort and are considered part of the historic planting associated with the parkway). This impact would be negligible, short-term, and adverse.

Thompson Boat Center Parking Area Rehabilitation

Under Alternative B, the parking area rehabilitation that includes removing and replacing the concrete sidewalk would result in fewer cut corners and visitors walking off of the trail on to the grass creating a minor to moderate, long-term, beneficial impact to the vegetation. The rehabilitation of the parking area would not impact the vegetation at the Thompson Boat Center as rehabilitation efforts would be conducted with the existing footprint of the parking area and entrance road to the Thompson Boat Center.

Cumulative Effects. Other past, present, or reasonably foreseeable future actions such as construction activities associated with the Kennedy Center access improvements, rehabilitation

of the parkway from P Street to the Maryland State line, construction of a new Swedish Embassy, and the Georgetown Waterfront Park may have the potential to have a long-term, adverse impact from the removal of existing vegetation. Alternative B, when added to these actions would contribute a noticeable and beneficial increment to the minor, long-term, and adverse cumulative effects.

Conclusion. Alternative B would create a negligible, long-term, adverse impact to vegetation from the removal of some grassed areas and the removal and replacement of 1 to 2 small diameter trees. Non-native vegetation would be replaced with native vegetation except the narcissus bulbs near the rock outcrop that would be replaced in kind. Minor to moderate, long-term, beneficial impacts would result from removing and replacing the concrete sidewalk. There would be the potential for minor, long-term, adverse cumulative effects.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Rock Creek and Potomac Parkway; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

**ALTERNATIVE C – PARKWAY REHABILITATION WITH ROADWAY REALIGNMENT**

Parkway Rehabilitation

Impacts under Alternative C would be similar to those impacts described under Alternative B.

Realignment of the Parkway

The realignment of the parkway would require the removal of some grassed areas, but would not require the removal of trees or shrubs. This impact would be minor, long-term, and adverse as the grassed areas would not be replaced.

Thompson Boat Center Parking Area Rehabilitation

Impacts under Alternative C would be similar to those impacts described under Alternative B.

Cumulative Effects. Cumulative effects for Alternative C would be the same as those proposed for Alternative B.

Conclusion. Alternative C would create a minor, long-term, adverse impact to vegetation from the removal of some grassed areas. There would be the potential for minor, long-term, adverse cumulative effects.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Rock Creek and Potomac Parkway; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

# IMPACTS ON TRANSPORTATION/TRAFFIC

## DEFINITION OF INTENSITY LEVELS

Analyses of the potential intensity of impacts on transportation/traffic were derived from the available information on the Rock Creek and Potomac Parkway and the professional judgment of the park staff and United States Park Police. The thresholds of change for the intensity of impacts on transportation/traffic are defined as follows:

- *negligible*: The impact would be a change that would not be perceptible or would be barely perceptible by most motorists.

- *minor:* The impact would have an adverse or beneficial change to levels of services or commute times. The effect would be noticeable, but would result in little inconvenience or benefit to commuters.

- *moderate:* The impact would affect the commute of a large number of motorists and would result in a noticeable change in commute time, convenience or benefit, and level of service.

- *major:* The impact has a substantial effect on the commute of a large number of motorists, and would be highly noticeable and have a considerable effect on commute times to the extent that the use of the parkway is undesirable to motorists.

*Duration:* Short-term – Effects lasting for the duration of the construction activities (less than 1 year); Long-term – Effects lasting longer than the duration of the construction (longer than 1 year).

## ALTERNATIVE A - NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the National Park Service would continue the current management operations of the parkway. The National Park Service would conduct minor "spot" repairs on the parkway between Virginia Avenue and P Street. A comprehensive rehabilitation of the parkway road surface and associated features would not be conducted at this time. The Thompson Boat Center would also receive only "spot" repairs to the parking surface. The foot and bike trail would remain in close proximity to the northbound lanes of the parkway and the parkway or the trail would not be relocated to spatially separate trail users from vehicular traffic. transportation/traffic would continue to be adversely impacted because of deteriorating conditions of the road pavement, the close proximity of the foot and bike trail, and the existing poor conditions of the parking area at the Thompson Boat Center.

The poor roadway conditions reduce the quality of the drive for motorists and this condition would expect to worsen over time as the roadway continues to deteriorate. The same would be true for visitors using the Thompson Boat Center parking area. Long-term, the National Park Service would be forced to close sections of the parkway and boathouse parking area. At some point in the near future, the National Park Service would have to mill and overlay the road and parking area at the Thompson Boat Center. The longer the maintenance is deferred the greater the likelihood that more of the underlying concrete base would have to be removed and replaced.

These closures and poor road conditions would impact traffic flows on the parkway and would result in noticeable delays. As a result, the No-Action Alternative would have a moderate, long-term, adverse impact on transportation/traffic.

Cumulative Effects. Other past, present, or reasonably foreseeable future actions such as, construction activities associated with the Kennedy Center access improvements, DC Department Public Works bridge rehabilitation projects, rehabilitation of the parkway from P Street to the Maryland State line, and the Georgetown Waterfront Park would have short-term adverse impacts on the parkway operation and traffic flows. The New Swedish Embassy and the Georgetown Waterfront Park would have long-term impacts from added vehicle trips to and from the embassy and the park, but these impacts would be expected to be negligible because the amount of trips generated would not affect existing traffic conditions. The No-Action Alternative would contribute a noticeable increment to the adverse impact and collectively, the cumulative effect to transportation/traffic would be adverse, negligible, short-term, and long-term.

Conclusion. Under the No-Action Alternative, moderate, long-term, adverse impacts to transportation/traffic would occur because the conditions along the parkway would continue to deteriorate to the point where traffic flows and parking at the Thompson Boat Center would be affected by the poor pavement conditions and the eventual closure of the road to perform a comprehensive milling and overlaying program. A negligible, short-term, adverse cumulative effect would occur.

**ALTERNATIVE B – PARKWAY REHABILITATION WITH TRAIL REALIGNMENT (PREFERRED ALTERNATIVE)**

Parkway Rehabilitation

The milling and overlaying of the Rock Creek and Potomac Parkway would improve the roadway surface. To the extent necessary, the concrete base would also be repaired. The concrete on the bridge decks would be repaired as necessary. Guardrails would be replaced with steel backed timbers. Minor drainage improvements would occur. All these actions would improve transportation/traffic on the parkway through extending the useful life of the transportation infrastructure, increasing safety, and improving driving conditions. Therefore, a moderate, long-term, beneficial impact would occur on transportation/traffic.

During construction, a portion of the parkway, in the project area, would have to be temporarily closed to visitors. To minimize these impacts, a comprehensive traffic control plan would be developed before construction and implemented during construction. This plan would specify certain work requirements to the contractor. For instance, there would be no night time construction and only two lanes of the parkway would be closed (one in each direction) for the milling and overlay of the parkway and the ramp terminals. In addition, no nighttime construction would occur. Other aspects of the traffic control plan would include reducing the posted speed to 25 miles per hour during construction and public notification of construction of activities and potential delays. The National Park Service would make public media releases two weeks prior to construction, post signs within the project limits two weeks in advance, use Variable Message Signs for the first 48 hours of each stage of construction, and notify the Traffic

Service Bureaus of any significant changes to traffic operations and flow. With these provisions during construction, the short-term, adverse impact on transportation/traffic would be moderate.

Realignment of the Foot and Bike Trail

The realignment of a segment of the foot and bike trail would have a negligible, long-term ,beneficial impact on the transportation system. With the installation of a steel-backed guard rail between the trail and traffic there would be a reduction in vehicles driving over the curb onto the grass median or into trail users.

The National Park Service would close the foot and bike trail during the realignment of the trail for safety reasons. During this time, the National Park Service would notify visitors of trail closures through public media releases two weeks prior to construction, post signs within the project area two weeks in advance. With notification and signage, the short-term, adverse impact during the trail closures would be moderate.

Thompson Boat Center Parking Area Rehabilitation

Under Alternative B, the National Park Service would mill and overlay the existing parking area and entrance road. Removal of the existing concrete would be performed as necessary. The National Park Service would reconstruct the parking area within its original footprint. Also, the bridge deck curbs and sidewalks would be repaired as necessary. All these actions would improve access and parking at the Thompson Boat Center through extending the useful life of the infrastructure, increasing safety, and improving parking conditions. A moderate, long-term, beneficial impact would occur on transportation/traffic because of the entrance road, parking area and bridge improvements.

The access road and the bridge to the Thompson Boat Center would only be closed for a period up to 30 days between November 1 and November 30 to minimize impacts to the concessions operations. The rehabilitation of the parking area would be performed in two phases because the access road must remain open and parking permitted in half of the parking lot to minimize impacts to use of the area. Based on the parking lot capacity analysis in the 1997 Transportation Study, closure of half of the parking area would be conducted during non-peak visitation periods when the parking lots are not full. Therefore, Alternative B would have negligible, adverse impacts on available parking at the Thompson Boat Center. The parking lot rarely exceeds more than 50 percent capacity during non-peak periods (Peccia, 1997).

Cumulative Effects. Other past, present, or reasonably foreseeable future actions such as, the Kennedy Center access improvements, DC Department of Public Works bridge rehabilitation projects and rehabilitation of the parkway from P Street to the Maryland State line would have long-term, beneficial impacts on the regional transportation system. These beneficial impacts would result from improvements to the infrastructure, traffic flows, and capacity. Long-term, Alternative B would contribute a negligible, beneficial impact and collectively, the cumulative effect to transportation/traffic would be minor, long-term, and beneficial. The New Swedish Embassy and the Georgetown Waterfront Park would have long-term adverse impacts from added vehicle trips to and from the embassy and the park, but these impacts would be expected

to be minor because the amount of trips generated would not create a noticeable change in commute time.

Short-term, there is the potential for adverse, cumulative impacts on transportation/traffic if the aforementioned projects were to be implemented at the same time. Specifically, the Kennedy Center access improvements would require extensive traffic control measures during construction. Alternative B also requires road closures and other traffic control measures. Together, these projects could have a major, short-term, adverse impact on traffic flows and operations. The Federal Highway Administration and National Park Service routinely coordinate construction activities to minimize the short-term impacts of multiple project construction on transportation/traffic. With proper coordination of construction activities and traffic control measures, the adverse cumulative effect would be moderate, short-term, and adverse.

Conclusion. Overall, implementation of Alternative B would have a moderate, long-term, beneficial impact on transportation/traffic because of the infrastructure improvements. A moderate, short-term, adverse impact would occur to trail use and parkway use because of necessary closures during construction. Impacts would be mitigated, to the degree possible through public notifications and work restrictions during peak use periods. A minor, long-term, beneficial cumulative effect would occur. With proper coordination of construction activities, the short-term, adverse cumulative effect would be minor.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Rock Creek and Potomac Parkway; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

**ALTERNATIVE C – PARKWAY REHABILITATION WITH ROADWAY REALIGNMENT**

Parkway Rehabilitation

The impacts under Alternative C would be the same as described under Alternative B.

Realignment of the Parkway

The realignment of the parkway would have no long-term effect on transportation/traffic in that operations, and roadway capacity would not change. Short-term, the realignment of the parkway would require portions of the parkway to be closed for a greater period of time for construction than described under Alternative B. The closure of portions of the parkway would have moderate, long-term, adverse impacts on transportation/traffic. To minimize these impacts, a comprehensive traffic control plan would be developed before construction and implemented during construction. This plan would specify certain work requirements to the contractor as discussed previously. Relocation of the roadway toward Rock Creek would reduce the radius of the curve just south of P Street, creating a sharper curve for motorists to navigate. This change would require a reduction in speed to maneuver through this curve creating a negligible, long-term, adverse impact.

Thompson Boat Center Parking Area Rehabilitation

The impacts under Alternative C would be the same as described under Alternative B.

Cumulative Effects. Cumulative effects under Alternative C would be the same as those described under Alternative B.

Conclusion. Overall, implementation of Alternative C would have a moderate, long-term, beneficial impact on transportation/traffic because of the infrastructure improvements. A moderate, short-term, adverse impact would occur to the parkway use because of necessary closures during construction. Impacts would be mitigated through public notifications and work restrictions during peak use period. A negligible, long-term, adverse impact would result from a reduction speed to maneuver through the curve in the parkway south of P Street. A minor, long-term, beneficial cumulative effect would occur. With proper coordination of construction activities and specifically traffic control measures, the short-term, adverse cumulative effect would be minor.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Rock Creek and Potomac Parkway; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

## IMPACTS ON VISITOR EXPERIENCE AND USE

### DEFINITION OF INTENSITY LEVELS

Analyses of the potential intensity of impacts on visitor experience and use were derived from the professional judgment of the park staff and their understanding of visitation patterns, combined with the assessment of what activities are currently available to visitors at the Rock Creek Park and more specifically for this project, the portion of the Rock Creek and Potomac Parkway from P Street to Virginia Avenue. The impacts on the visitor's ability to experience a full range of park resources were analyzed by examining resources and objectives presented in the park's general management plan. The potential changes identified in the proposed action alternatives for visitor experience and use were evaluated by identifying projected increases or decreases in recreational trail use (i.e., walking, in-line skating, and bicycling), automobile use, and other visitor uses, and determining whether or how these projected changes would affect the desired visitor experience and to what degree and for how long. The thresholds of change for the intensity of impacts on visitor experience and use are defined as follows:

- *negligible*: The impact would be a change that would not be perceptible or would be barely perceptible by most visitors.

- *minor*: The impact would change a few visitors' experiences, which would be noticeable, but would result in little distraction or improvements in the quality of the experience;

- *moderate:* The impact would change a large number of visitors' experiences and would result in a noticeable decrease or improvement in the quality of the experience. This would be indicated by a change in frustration level or inconvenience for a length of time.

- *major:* The impact has a substantial improvement in many visitors' experiences or a severe drop in the quality of many visitors' experiences, such as the addition or elimination of a recreational opportunity or a permanent change to an area. The impact would preclude future generations of some visitors from enjoying the park resources.

*Duration:* Short-term – Effects lasting for the duration of the construction activities (less than 1 year); Long-term – Effects lasting longer than the duration of the construction (longer than 1 year).

**ALTERNATIVE A - NO-ACTION ALTERNATIVE**

Under the No-Action Alternative, the National Park Service would continue management actions that would include minor repairs to the parkway, Thompson Boat Center parking area, and the foot and bike trail. The foot and bike trail would remain near the shoulder of the parkway and would not be realigned away from the roadway. The visitor experience would continue to be affected by poor pavement conditions and the trail's close proximity to the roadway to southbound traffic. Currently, pedestrians, in-line skaters, and bicyclists must be cautious of vehicles on the southbound lane of the parkway because it is about 3 feet from the trail. On most other parts of the trail, trail users have a much more enjoyable user experience because the trail is much farther from the road. The same concern is true for motorists traveling southbound on the parkway. Motorists have to be aware of the trail's close location to the roadway. Implementation of the No-Action Alternative would continue to have a minor, long-term, adverse impact on visitor experience and use because of the deteriorating conditions of the pavement, and the trail's close proximity to the roadway, and lack of a protective barrier.

Cumulative Effects. Other nearby transportation projects such as the Kennedy Center access improvements and rehabilitation of the parkway from P Street to the Maryland State line would have a short-term, adverse impact on the visitor experience. These projects would affect the driving experience, access, and trail use during construction activities. The No-Action Alternative would contribute a small increment to the adverse impact and collectively, the cumulative effect on transportation/traffic would be minor, short-term, and adverse. The Georgetown Waterfront Park would create beneficial impacts to visitor experience and use. The No-Action Alternative would not add to these beneficial impacts; therefore, no beneficial, cumulative effects would occur.

Conclusion. Under the No-Action Alternative, the parkway pavement would continue to worsen over time and reduce visitor's positive experience. The trail would remain in close proximity to vehicles on the parkway, which also has an adverse impact on visitor experience. Overall, implementation of the No-Action Alternative would have a minor, long-term, adverse impact on visitor experience and use. The cumulative effect on visitor experience and use would be minor, short-term, and adverse.

**ALTERNATIVE B – PARKWAY REHABILITATION WITH TRAIL REALIGNMENT (PREFERRED ALTERNATIVE)**

Parkway Rehabilitation

The milling and overlaying of the parkway would improve the roadway surface and thus enhance visitor's driving experience on the parkway by creating a smoother ride. A minor, long-term, beneficial impact would occur.

Realignment of the Foot and Bike Trail

Realignment of the foot and bike trail would have a minor, long-term, beneficial impact on the visitor experience. The realignment of the trail would further separate trail users from the vehicular traffic on the parkway reducing the interaction of pedestrian and bicycle traffic with vehicle traffic. This improvement would provide improved conditions for trail users.

Visitors would experience an inconvenience from temporary trail detours and roadway lane closures. The impacts would be minimized through the implementation of a detailed traffic control plan and other work requirements specified in the construction contract. Another trail exists outside of Rock Creek Park that parallels this portion of the foot and bike trail. The trail can be accessed near P Street and runs along the top of the ridge by Rose Park. The trail then connects back to the parkway trail after M Street. Overall, a moderate, short-term, adverse impact would occur on the visitor experience and use because of parkway, parking, and trail closures. And the long-term impact would be minor and beneficial.

Thompson Boat Center Parking Area Rehabilitation

Improvements to the access road, parking lot and bridge would have a minor, beneficial impact on visitor experience because of improved site conditions and amenities, which would increase visitor enjoyment. The Thompson Boat Center access road and the bridge over Rock Creek would only be closed for 30 days or less between November 1 and November 30 to minimize impacts to the concessionaire's operations. During the construction of the parking area, the access road would remain open and parking permitted at half of the parking lot. Based on the parking lot capacity analysis in the 1997 Rock Creek transportation study, closure of half of the parking area would be conducted during non-peak visitation periods when use of the parking area is usually below 50 percent occupancy. Therefore, Alternative B would have negligible, short-term adverse impacts on visitor use at the Thompson Boat Center, and negligible, long-term, beneficial impacts.

Cumulative Effects. Other past, present, or reasonably foreseeable future actions such as, the Kennedy Center access improvements, rehabilitation of the parkway from P Street to the Maryland State line, and the Georgetown Waterfront Park would have long-term, beneficial impacts on the visitor experience and use. These beneficial impacts would result from improvements to vehicle and pedestrian access on the parkway and nearby Kennedy Center, and an increased visitor experience from the creation of new trails associated with the Georgetown Waterfront Park. Long-term, Alternative B would contribute a small increment to the beneficial impact and collectively, the cumulative effect on visitor experience and use would be moderate, long-term, and beneficial.

Short-term, there is the potential for adverse, cumulative impacts on visitor experience and use if the aforementioned projects were to be implemented at the same time. Specifically, the Kennedy Center access improvements would require extensive traffic control measures during construction. Alternative B also requires road closures and other traffic control measures. Together, these projects could have a major, short-term, adverse cumulative impact on visitor experience and use. In turn, this would affect the visitor experience and reduce trail and parkway use. The Federal Highway Administration and National Park Service routinely coordinate construction activities to minimize the short-term impacts of multiple construction projects occurring simultaneously. With coordination of construction activities and specifically, traffic control measures, the adverse cumulative effect would be minor and short-term.

Conclusion. Overall, Alternative B would have a moderate, long-term, beneficial impact on the visitor experience because of improvements to the road, trail, and parking infrastructure. These improvements would enhance visitor enjoyment at the park and provide visitors with a safer environment. A moderate, short-term, adverse impact would result from construction activities. Overall, the cumulative effect on visitor experience and use would be moderate, long-term, and beneficial. With coordination of construction activities, the short-term, adverse, cumulative effect would be minor.

## ALTERNATIVE C – PARKWAY REHABILITATION WITH ROADWAY REALIGNMENT

### Parkway Rehabilitation

The impacts under Alternative C would be the same as described under Alternative B.

### Realignment of the Parkway

Realignment of the parkway would have a minor, long-term, beneficial impact on the visitor experience. The realignment of the parkway would spatially separate trail users from the vehicular traffic on the parkway. Trail users would experience an added sense of protection when using the trail segment adjacent to the parkway.

Alternative C would require the parkway to be closed for a longer period for the realignment. Realignment of the parkway would impact more visitors because the parkway accommodates more visitor use than the foot and bike trail. During construction activities, visitor experience and use may be impacted by traffic and health and safety impacts. Visitors would experience an inconvenience from closures. The impacts would be minimized through the implementation of a detailed traffic control plan and other work requirements. Overall, a moderate, short-term, adverse impact would occur on the visitor experience and use because of parkway closures, and a minor, long-term, beneficial impact because of the road realignment.

### Thompson Boat Center Parking Area Rehabilitation

The impacts under Alternative C would be the same as described under Alternative B.

Cumulative Effects. Other past, present, or reasonably foreseeable future actions such as, the Kennedy Center access improvements, rehabilitation of the parkway from P Street to the

Maryland State line, and the Georgetown Waterfront Park would have long-term, beneficial impacts on the visitor experience and use. These beneficial impacts would result from improvements to vehicle and pedestrian access on the parkway and nearby Kennedy Center, and an increased visitor experience from the creation of new trails associated with the Georgetown Waterfront Park. Long-term, Alternative B would contribute a small increment to the beneficial impact and collectively, the cumulative effect on visitor experience and use would be minor, long-term, and beneficial.

Short-term, there is the potential for adverse, cumulative impacts on visitor experience and use if the aforementioned projects were to be implemented at the same time. Specifically, the Kennedy Center access improvements would require extensive traffic control measures during construction. Alternative B also requires road closures and other traffic control measures. Together, these projects could have a major, short-term, adverse cumulative impact on visitor experience and use. In turn, this would affect the visitor experience and reduce trail and parkway use. The Federal Highway Administration and National Park Service routinely coordinate construction activities to minimize the short-term impacts of multiple construction projects occurring simultaneously. With coordination of construction activities and specifically, traffic control measures, the adverse cumulative effect would be minor and short-term.

Conclusion. Overall, Alternative C would have a minor, long-term, beneficial impact on the visitor experience because of improvements to the road, trail, and parking infrastructure. These improvements would enhance visitor enjoyment at the park and provide visitors with a safer environment. Moderate, short-term, adverse impact would occur on the visitor experience because of parkway, parking, and trail closures. Overall, the cumulative effect on visitor experience and use would be minor, long-term, and beneficial. With coordination of construction activities, the short-term, adverse, cumulative effect would be minor.

# CONSULTATION AND COORDINATION

As part of the planning and analysis, this EA has been prepared to evaluate alternatives and options for accomplishing this work with the least impact to Park resources and Park visitors. The NPS is the lead agency for resource compliance and has prepared this EA in cooperation with the Eastern Federal Lands Highway Division of the Federal Highway Administration.

In accordance with Section 106 of the National Historic Preservation Act of 1966, the Superintendent for Rock Creek Park has submitted a letter to the District of Columbia Historic Preservation Office to initiate consultation. A copy of the letter is provided in Appendix A.

In accordance with Section 7 of the Endangered Species Act of 1973, comments were solicited from the U.S. Fish and Wildlife Service and the National Park Service on known occurrences of rare, threatened, and endangered species within the project area that could be adversely impacted by the proposed alternatives. The National Park Service maintains a list for the District of Columbia, who does not maintain their own list. Copies of these letters can be found in Appendix A.

The Sediment and Storm Water Technical Services Branch of the DC Department of Health – Environmental Health Administration ensures the protection of health, safety, and welfare of the residents of the District of Columbia by managing land disturbing activities to prevent accelerated soil erosion and sediment deposition in the Potomac and Anacostia Rivers and their tributaries. The Branch develops and implements programs in storm water management, erosion and sediment control, and floodplain management in support of the regulation of land disturbing activities. Therefore, before any land disturbing activities can occur a Soil Erosion Control Plan and a Stormwater Management Plan would be completed and submitted to this office along with a construction permit application. An erosion and sediment control plan is required for fifty square feet of land disturbance. A storm water management plan is required for five thousand square feet of land disturbance. For this project, the FHWA – Eastern Federal Lands Highway Division would obtain a construction permit that would include a Soil Erosion Control Plan prior to any land disturbance.

This Environmental Assessment would be distributed for public and agency review with a comment period of at least 30 days. The National Park Service would consider the comments received during the comment period prior to determining the final decision document that would be sent to the National Capital Region Director for approval and signature.

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U.S. Geological Survey (USGS). 2002. Water Quality, Sediment Quality, and Steam-Channel Classification of Rock Creek, Washington, D.C., 1999-2000. Water-Resources Investigations Report 02-4067.

**Personal Communication**

Estes, E., 2005. Personal communication between E. Estes, Greenhorne & O'Mara, Inc., and Tory Pettiford, U.S. Park Police regarding accident statistics along Rock Creek and Potomac Parkway from 1995 through 2004.

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# APPENDIX A

# Agency Coordination Letters

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# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

May 5, 2004

Mr. Steven Pomeroy
Environmental Scientist
Greenhorne & O'Mara, Inc.
9001 Edmonston Rd.
Greenbelt, MD 20770

*RE: Rock Creek and Potomac Parkway between Virginia Avenue and P Street and the Thompson Boat Center Parking Area, Washington, DC*

Dear Mr. Pomeroy:

This responds to your letter, received January 22, 2004, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened in the above referenced project area. We have reviewed the information you enclosed and are providing comments in accordance with Section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no proposed or federally listed endangered or threatened species are known to exist within the project impact area. Therefore, no Biological Assessment or further Section 7 consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or should additional information on the distribution of listed or proposed species become available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. Limited information is currently available regarding the distribution of other rare species in the District of Columbia. However, the Nature Conservancy and National Park Service (NPS) have initiated an inventory of rare species within the District. For further information on such rare species, you should contact Christina Wright of the DC Natural Heritage Program at (202) 342-1443 ext. 230.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the Basin's remaining wetlands, and the long term goal of increasing the quality and quantity of the Basin's wetlands resource base. Because of this policy and the functions and values wetlands perform, the Service recommends avoiding wetland impacts. All wetlands within the project area should

be identified, and if alterations of wetlands is proposed, the U.S. Army Corps of Engineers, Baltimore District, should be contacted for permit requirements. They can be reached at (410) 962-3670.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interests in these resources. If you have any questions or need further assistance, please contact Maricela Constantino at (410) 573-4542.

Sincerely,

Mary Ratnaswamy

Mary J. Ratnaswamy, Ph.D.
Program Supervisor, Threatened and Endangered Species

**From:** POMEROY, Steven
**Sent:** Wednesday, March 17, 2004 1:57 PM
**To:** ESTES, Elizabeth
**Subject:** FW: data request PARK CREEK PARK T&E REQUEST FROM NPS

-----Original Message-----
**From:** Shawn_Carter@nps.gov [mailto:Shawn_Carter@nps.gov]
**Sent:** Wednesday, March 17, 2004 1:37 PM
**To:** spomeroy@g-and-o.com
**Subject:** data request

Mr. Pomeroy,

This is a response to your data request for the existence of any RTE species between Virginia Avenue and P Street. I could locate no records within the boundaries you describe. Some records exist for Theodore Roosevelt Island, which is adjacent to the area in question. However, none of those records have Federal status.

Sorry for the delay in this reply. Please contact me if you require additional information.

Shawn L. Carter, Ph.D.
Regional Coordinator - Inventory and Monitoring
National Capital Region - National Park Service
4598 MacArthur Blvd., N.W.
Washington, DC 20007
(202) 342-1443 x227
(202) 997-4572 cell
(202) 282-1031 fax
http://www1.nature.nps.gov/im/units/ncrn/index.html
http://www1.nature.nps.gov/protectingrestoring/im/inventoryandmonitoring.htm
http://science.nature.nps.gov/im/monitor

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H4217 (ROCR)

February 24, 2004

Ms. Lisa Burcham
State Historic Preservation Officer
Historic Preservation Office
801 North Capital Street NE, 3rd Floor
Washington D.C. 20002

Reference: Rock Creek Park, PMIS 44964 & 44976

Subject: Compliance with Section 106 of the National Historic Preservation Act and National Environmental Policy Act (NEPA)

Dear Ms. Burcham:

The National Park Service (NPS) is developing plans to rehabilitate asphalt paving between Virginia Avenue and P Street NW, along the Rock Creek Parkway and provide handicap parking and repaving at the Thompson Boat Center.

We have begun the NEPA process for this project and anticipate preparing an environmental assessment. In accordance with 36 CFR 800.8 (c) of the Advisory Council on Historic Preservation's regulations, I am notifying your office in advance of the park's intention to use the NEPA process to meet its obligations under Section 106 of the National Historic Preservation Act.

We look forward to working with your organization, other consulting parties, and the public as we proceed with the environmental planning process for this project. We would be happy to arrange a meeting with you at your convenience to discuss this project. Please contact Cultural Resource Manager Perry Wheelock at 202-895-6011, or David Hayes, Denver Service Center Environmental Specialist at (303) 969-2975 (email david_hayes@nps.gov.)

Sincerely,

/s/ Adrienne A. Coleman

Adrienne A. Coleman
Superintendent, Rock Creek Park

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As the nation's principal conservation agency, the Department of the interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protection our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. Administration.

NPS D-121, May 2005